

67760-58

6-26-2003

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

WASHINGTON, D.C. 20460

JUN 26 2003

OFFICE OF  
PREVENTION, PESTICIDES  
AND TOXIC SUBSTANCES

Ms. Kari E. Mavian  
Cheminova Inc.  
1700 Route 23, Suite 300  
Wayne, NJ 07470

Dear Ms Mavian:

Subject: Glyphos Custom Herbicide (Update First Aid)  
EPA Registration No. 67760-58  
Your Application Dated April 7, 2003

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

1. At the beginning of the list of Personal Protective Equipment (PPE) within the Precautionary Statements, add the statements "Some of the materials that are chemical-resistant to this product are listed below. If you want more options, follow the instructions for category A on an EPA chemical-resistance category selection chart." In addition, revise your current glove requirement to a requirement for "chemical resistant gloves made of any waterproof material such as polyethylene or polyvinyl chloride."
2. Within the list of PPE for early re-entry in the Agricultural Use Requirements box, revise your current glove requirement to a requirement for " to a requirement for "chemical resistant gloves made of any waterproof material."
3. In the Non-Agricultural Use Requirements box, delete the phrase "to prevent transfer of this product to non-target vegetation" from the last sentence.
4. Revise the second sentence of your Environmental Hazards section to read "Do not contaminate water when **cleaning equipment or** disposing of equipment washwaters."
5. The following language for bulk and minibulk containers must be incorporated into the Storage and Disposal Section of your label.

Container Disposal (Bulk and Mini Bulk)

**Instructions for Users**

"When the container is empty, replace the cap and seal all openings that have been opened during use, and return the container to the point of purchase, or to an alternate location designated by the

registrant at the time of purchase of this product. If not returned to the point of purchase or a designated location, triple rinse or pressure rinse the empty container and offer for recycling if available.

### **Instructions for Users and Refillers**

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

### **Instructions for Refillers**

Prior to refilling, inspect carefully for damage such as cracks, punctures, abrasions, worn-out threads and closure devices. Check for leaks after refilling and before transporting. If the container cannot be refilled, triple rinse or pressure rinse the empty container and offer for recycling if available.

6. As stated in our letter dated September 28, 2001, on page 5 delete the second paragraph under "No soil activity" and the paragraphs entitled "Volatility" and "Toxicology Testing".

7. Add a statement similar to below to the areas of your label where generic chemical names such as 2,4-D, dicamba, diuron, or atrazine are recommended as tank-mix partners.

"This product may be tank-mixed with the following products provided the individual product to be tank-mixed is registered for use on this site."

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

Sincerely,

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

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# Glyfos<sup>®</sup> Custom Herbicide

Avoid herbicide contact with foliage, green stems, exposed non-woody roots or fruit of crops, desirable plants and trees because severe injury or destruction may result.

<b>ACTIVE INGREDIENT:</b>	
*Glyphosate (N-(phosphonomethyl) glycine) in the form of its isopropylamine salt	<b>53.8%</b>
<b>INERT INGREDIENTS:</b>	<b>46.2%</b>
<b>TOTAL:</b>	<b>100.0%</b>

\*Contains 648 grams per liter or 5.4 pounds per U.S. gallon of the active ingredient glyphosate, in the form of its isopropylamine salt. Equivalent to 480 grams per liter or 4 pounds per U.S. gallon of the acid, glyphosate.

## KEEP OUT OF REACH OF CHILDREN CAUTION

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

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 without delay.

SEE BOOKLET FOR ADDITIONAL PRECAUTIONARY STATEMENTS AND USE DIRECTIONS

EPA Reg. No.: 67760-58  
EPA Est. No.

**NET CONTENTS:**

Manufactured for:  
Cheminova, Inc.  
1700 Route 23  
Wayne, NJ 07470

**ACCEPTED  
with COMMENTS  
In EPA Letter Dated:**  
  
**JUN 26 2003**  
**Under the Federal Insecticide,  
Fungicide, and Rodenticide Act,  
as amended, for the pesticide  
registered under EPA Reg. No.  
67760-58**

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DISCLAIMER

**PRECAUTIONARY STATEMENTS  
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KEEP OUT OF REACH OF CHILDREN  
CAUTION**

Harmful if absorbed through skin. Avoid contact with eyes, skin, or clothing.

<b>FIRST AID</b>	
<b>IF ON SKIN OR CLOTHING:</b>	Take off contaminated clothing. Rinse skin immediately and with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.
Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-228-5635 Ext. 153 for emergency medical treatment information.	

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

**PERSONAL PROTECTIVE EQUIPMENT (PPE)**

**Applicators and others handlers must wear:** long-sleeved shirt and long pants, socks and shoes and gloves (such as Nitrile, Butyl, Neoprene, and/or Barrier Laminate). Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

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

**USER SAFETY RECOMMENDATIONS:**

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.

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

**DIRECTIONS FOR USE**

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

**Agricultural Use Requirements**

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

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

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil or water, are: coveralls, gloves such as Nitrile, Butyl, Neoprene, and/or Barrier Laminate, shoes plus socks.

**Non-Agricultural Use Requirements**

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

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

**STORAGE AND DISPOSAL**

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

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**STORAGE:** STORE ABOVE 10° F (-12° C) TO KEEP FROM CRYSTALLIZING. Crystals will settle to the bottom. If crystals form, allow product to warm above 50° F (10° C) and mix well or recirculate to redissolve.

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

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

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

**FOR MINI-BULK REFILLABLE CONTAINERS:** Do not reuse container, except for refill in accordance with a valid Cheminova Repackaging or Toll Repackaging Agreement. If not refilled or returned to an authorized repackaging facility, triple rinse container, then puncture and dispose of in a sanitary landfill, or by incineration, or if allowed by State and local authorities, by burning. If burned, stay out of smoke.

**FOR PLASTIC CONTAINERS:** Do not reuse container. Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill or by incineration, or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.

**FOR METAL CONTAINERS:** Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures approved by State and local authorities.

## GENERAL INFORMATION

### Product Description:

This product is a postemergent, systemic herbicide with no soil residual activity. It is generally non-selective and gives broad spectrum control of many annual weeds, perennial weeds, woody brush and trees. It is formulated as a water-soluble liquid. It may be applied through most standard industrial or field-type sprayers after dilution and thorough mixing with water or other carriers according to label instructions.

This product requires use of a nonionic surfactant. When spraying this product, mix 2 or more quarts of a nonionic surfactant per 100 gallons of spray solution. The surfactant should contain at least 70 percent active ingredient. Ammonium sulfate, drift control additives, dyes, or colorants may also be used.

### 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 dense 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.

**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 runoff.

**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 entering ground water.

**Biological Degradation:**

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

**Volatility:**

Glyphos Custom 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 6 quarts of this product per acre per year.

For non-crop uses, the combined total of all treatments must not exceed 8 quarts of this product per acre per year.

The maximum use rates stated throughout this product's labeling apply to this product combined with the use of all other herbicides containing glyphosate or sulfosate as the active ingredient, whether applied as mixtures or separately. Calculate the application rates and ensure that the total use of this and other glyphosate or sulfosate containing products does not exceed stated maximum use rate.

**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.

### 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 muddy 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 where 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.

#### Surfactant

This product requires use of a nonionic surfactant. When using this product, mix 2 or more quarts of a nonionic surfactant per 100 gallons of spray solution. Examples of when to use the higher surfactant rate include, but are not limited to: high water volumes, adverse environmental conditions, tough to control weeds, weeds under stress, surfactants with less than 70% active ingredient, tank mixes, etc.

#### Tank Mixing Procedure

Mix labeled tank mixtures of this product as follows:

1. Place a 20 to 35 mesh screen or wetting basket over filling port.
2. Through the screen, fill the spray tank one-half full with water and start agitation.
3. 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.
4. 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.
5. 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.
6. Continue filling the spray tank with water and add the required amount of this product near the end of the filling process.
7. Add nonionic surfactant to the spray tank before completing the filling process.
8. Add individual formulations to the spray tank as follows: wettable powder, flowable, emulsifiable concentrate, drift control additive, water soluble liquid followed by surfactant.

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



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

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 Volume	Amount of Glyphos Custom					
	3/4%	1 %	1 1/2 %	2 %	5 %	10 %
1 Gallon	1 oz.	1 1/3 oz.	2 oz.	2 2/3 oz.	6 1/2 oz.	13 oz.
25 Gallon	1 1/2 pt.	1 qt.	1 1/2 qt.	2 qt.	5 qt.	10 qt.
100 Gallon	3 qt.	1 gal.	1 1/2 gal.	2 gal.	5 gal.	10 gal.
<b>2 tablespoons = 1 fluid ounce</b>						

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 label. 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 manufacturer's 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 mistblowers.

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**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 that 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.

**SPRAY DRIFT MANAGEMENT**

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

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

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

**AERIAL EQUIPMENT**

DO NOT apply this product using aerial 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 exceed 24 fluid ounces per acre. Aerial applications of this product may be made in annual cropping conventional tillage systems, fallow and reduced tillage systems, and preharvest applications. Refer to the individual use area sections of this label for recommended volumes and application rates.

**NOTE:** For aerial application in California, refer to Federal supplemental label for aerial application for specific instructions, restrictions and requirements. For aerial applications, consult with State or local authorities regarding any additional requirements for aerial treatments.

**AERIAL SPRAY DRIFT MANAGEMENT**

The following drift management requirements must be followed to avoid off-target drift movement from aerial applications to agricultural field crops.

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

**Importance of Droplet Size**

The most effective way to reduce drift potential is to apply large droplets. The best drift management strategy is to apply the largest droplets that provide sufficient coverage and control. Applying larger droplets reduces drift potential, but will not prevent drift if applications are made improperly, or under unfavorable environmental conditions (see 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 penetration. When higher flow rates are needed, use higher flow rate nozzles instead of increasing pressure.

**Number of Nozzles** - Use the minimum number of nozzles that provide uniform coverage.

**Nozzle Orientation** - Orienting nozzles so that the spray is released backwards, parallel to the airstream, will produce larger droplets than other orientations. Significant deflection from the horizontal will reduce droplet size and increase drift potential.

**Nozzle Type** - Use a nozzle type that is designed for the intended application. With most nozzle types, narrower spray angles produce larger droplets. Consider using low-drift nozzles. Solid stream nozzles oriented straight back produce larger droplets than other nozzle types.

**Boom Length** - For some use patterns, reducing the effective boom length to less than 3/4 of the wingspan or rotor length may further reduce drift without reducing swath width.

**Application Height** - Applications should not be made at a height greater than 10 feet above the top of the largest plants unless a greater height is required for aircraft safety. Making applications at the lowest height that is safe reduces 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:** Local terrain can influence wind patterns. Every applicator should be familiar with local wind patterns and how they affect spray drift.

**Temperature and Humidity**

When making applications in low relative humidity, set up equipment to produce larger droplets to compensate for evaporation. Droplet evaporation is most severe when conditions are both hot and dry.

**Temperature Inversions**

Applications should not occur during a temperature inversion because drift potential is high. Temperature inversions restrict vertical air mixing, which causes small suspended droplets to remain in a concentrated cloud. This cloud can move in unpredictable directions due to the light variable winds common during inversions. Temperature inversions are characterized by increasing 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 fog is not present, inversions can also be identified by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a 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).

Avoid direct application to any body of water.

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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 or 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.

Banvel tank mixtures may not be applied by air in California.

#### **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 spraying 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. Refer to **MIXING DIRECTIONS** section for more information on preparing spray solutions of certain percentage content.

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 1½ % solution on harder-to-control perennials, such as Bermuda grass, dock, field bindweed, hemp dogbane, milkweed and Canada thistle.

When using application methods which result in less than complete coverage, use a 3.75% solution for annual and perennial weeds and a 3.75 to 5% solution for woody brush and trees.

#### **SELECTIVE EQUIPMENT**

This product may be applied through recirculating spray systems, shielded applicators, hooded sprayers, wiper applicators or sponge bars after dilution and thorough mixing with water to listed weeds growing in any noncrop site specified on this label 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 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 exposed to the herbicide solution. Weeds not contacted by the herbicide solution will not be affected. This may occur in dense clumps, severe infestations or when height of the weeds 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 HERBICIDE WITH DESIRABLE VEGETATION.**

A hooded sprayer is a type of shielded applicator. The spray pattern is completely enclosed on the top and all four sides by a hood, thereby shielding the crop from the spray solution. This equipment must be set up and operated in a manner that avoids bouncing or raising the hoods off the ground in any way. If the hoods are raised, spray particles may escape and come into contact with the crop, causing damage or destruction of the crop. The spray hoods must be operated on the ground or skimming across the ground. Tractor speed must be adjusted to avoid bouncing of the spray hoods. Avoid operation on rough or sloping ground where the spray hoods might be raised off the ground.

#### **Wiper Applicators and Sponge Bars**

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

Equipment must be designed, maintained and operated to prevent the herbicide solution from contacting desirable vegetation. 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.

Nonionic surfactant at a rate of 10 percent by volume of total herbicide solution is recommended with all wiper applications.

**For rope or sponge wick applicators:** Mix 3 quarts of this product in 2 gallons of water to prepare a 25% solution. Apply this solution to weeds listed in this section.

**For porous-plastic applicators:** Solutions ranging from 25 to 100% of this product in water may be used in porous-plastic wiper applicators.

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

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
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Bermuda grass	Ragweed, giant
Dogbane, hemp	Smutgrass
Dogfennel	Sunflower
Guineagrass	Thistle, Canada
Johnsongrass	Thistle, musk
Milkweed	Vaseygrass
Nightshade, silverleaf	Velvetleaf
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.

**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 2 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 1/2 pints 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 (3 to 6 pints per acre).

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

See the **ROUNDUP READY® CROPS** section for use of this product in crops that contain the Roundup Ready gene. DO NOT use the instructions in this **CROPS** section.

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

When applying this product prior to transplanting crops into plastic mulch, care must taken to remove residues of this product, which could cause crop injury, from the plastic prior to transplanting. Residues can be removed by a single 0.5 inch application of water, either by natural rainfall or via a sprinkler system. Applications made at emergence will result in injury or death to emerged seedlings.

**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, preemergence, at-planting, preharvest (alfalfa only), spot treatment, (alfalfa and clover only), wiper applications (alfalfa and clover only), renovation.

**Preplant, Preemergence and At-planting**

Use instructions: This product may be applied before, during or after planting crops listed in this section. Applications must be made prior to emergence of this 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 1.5 pints of this product per acre as a preharvest treatment. Do not use for 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 before grazing livestock or harvesting.

**Renovation**

Use instructions: This product may be applied as a broadcast spray to existing stands of alfalfa, clover, and other labeled forage legumes. 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, preemergence, spot treatment, postharvest.

**Preplant, Preemergence**

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

**CANOLA**

**Types of applications:** Preplant, preemergence. For Roundup Ready canola, see the **ROUNDUP READY CROPS** section of this label.

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Use instructions: This product may be applied before, during or after planting canola. Applications must be made prior to emergence of the crop.

Precautions, restrictions: Do not apply more than 1.5 quarts of this product per acre by ground.

**CEREAL CROPS**

**Labeled crops:** Barley, buckwheat, millet (pearl, proso), oats, rice, rye, teosinte, triticale, wheat (all), wild rice.

**Types of applications:** Preplant, preemergence, at-planting, spot treatment (except rice), postharvest, preharvest (wheat only), wiper applicators (wheat only), red rice control prior to planting rice.

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

**Preplant, Preemergence 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 treatment 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 that were growing in the crop at the time of harvest. Tank mixtures with 2,4-D or dicamba may be used.

Precautions, restrictions: For any crop not listed on this label, applications must be made at least 30 days prior to planting the next crop. 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 1.5 pints 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.

**Red rice control prior to planting rice**

Use instructions: Apply 36 fluid ounces of this product in 5 to 10 gallons of water per acre. Flush fields prior to application to obtain uniform germination and stand of red rice. Make application when the majority of the red rice plants are in the 2-leaf stage and no more than 4 inches tall. Red rice plants with less than 2 true leaves may be only partially controlled.

Precautions, restrictions: Avoid spraying during low humidity conditions, as reduced control may result. Do not treat rice fields or levees when the fields contain water. Do not re-flood treated fields for 8 days following application.



**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 of 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 Christmas trees.

Precautions, restrictions: Precautions should be taken to protect nontarget plants during site preparation applications.

**CITRUS CROPS**

**Labeled 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 CROPS (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 gallons of water per acre. Where weed foliage is dense, use 10 to 30 gallons of water per acre.

For goatweed, apply 3 to 4.5 pints of this product per acre. Apply in 20 to 30 gallons of water per acre when plants are actively growing. Use 3 pints per acre when plants are less than 8 inches tall and 4.5 pints when plants are greater than 8 inches tall. If goatweed is greater than 8 inches tall, the addition of Krovar® II or Karmex® may improve control. Refer to the individual product labels for specific crops, rates, geographic restrictions and precautionary statements.

**Perennial weeds:**

S = Suppression  
PC = Partial control

B = Burndown  
C = Control

Weed Species		Glyfos Custom Rate per Acre			
		1.5 PT	3 PT	4.5 PT	7.5 PT
Bermuda grass		B	-	PC	C
Guineagrass	Texas & Florida Ridge	B	C	C	C
	Florida Flatwoods	-	B	C	C
Paragrass		B	C	C	C
Torpedograss		S	-	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, postemergence weed control in dormant CRP grasses, wiper.

**Rotating out of CRP, Site Preparation**

Use instructions: This product may be used to prepare CRP land for crop production.

**Postemergence Weed Control In Dormant CRP Grasses, 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 9 to 12 fluid ounces of this product per acre in early spring before desirable CRP grasses, such as crested and tall wheatgrass, break dormancy and initiate green growth. Late fall applications can be made after desirable 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, preemergence, at-planting, spot treatment, hooded sprayers, preharvest, postharvest. For Roundup Ready corn, see the **ROUNDUP READY CROPS** section of this label.

**Preplant, Preemergence 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 **ANNUAL WEEDS RATE TABLES** section, of this label for areas included in this recommendation.

ATRAZINE	EXTRAZINE®	LOROX®
BANVEL	FRONTIER®	MARKSMAN®
BICEP MAGNUM™	GUARDSMAN®	MICRO-TECH®
BICEP II MAGNUM	HARNESS®	PARTNER®
BLADEx®/CYANAZINE	HARNESS XTRA	PROWL®
BROADSTRIKE™	HARNESS XTRA 5.6L	SIMAZINE
BULLET®	LARIAT®	SURPASS™
DUAL MAGNUM™	LASSO®/ALACHLOR	SURPASS 100
DUAL II MAGNUM	LINEX™	TOPNOTCH™

For improved burndown, this product may be tank mixed with 2,4-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 1.5 pints per acre in these tank mixtures. For other labeled annual weeds, apply 12 fluid ounces to 18 fluid ounces of this product per acre when weeds are less than 6 inches tall, and 1.5 to 2.25 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 planting.

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

**Hooded Sprayers**

Use instructions: This product may be used through hooded sprayers for weed control between the rows of corn. Only hooded sprayers that completely enclose the spray pattern may be used.

When applying to corn that is grown on raised beds, ensure that the hood is designed to completely enclose the spray solution. If necessary, extend the front and rear flaps of the hoods to reach the ground in deep furrows.

Follow these requirements:

- The spray hoods must be operated on the ground or skimming across the ground.
- Do not apply more than 1.5 pints of this product per acre per application.
- Corn must be at least 12 inches tall, measured without extending leaves.
- Leave at least an 8 inch untreated strip over the drill row. For example, if the crop row width is 38 inches, the maximum width of the spray hood should be 30 inches.
- Maximum tractor speed: 5 mph.
- Maximum wind speed: 10 mph.
- Use low-drift nozzles.

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

Precautions, restrictions: Contact of this product in any manner to any vegetation to which treatment is not intended may cause damage. Such damage shall be the sole responsibility of the applicator. Allow a minimum of 7 days between application and grazing or harvest. Do not apply more than 4.5 pints of this product per acre per year for hooded sprayer applications.

**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 target area for the same reason.

**Preharvest**

Use instructions: Make applications at 35 percent grain moisture or less. Ensure that maximum kernel fill is complete and the corn is physiologically mature (black layer formed). For ground applications, apply up to 4.5 pints of this product per acre. For aerial applications, apply up to 1.5 pints of this product per acre.

Precautions, restrictions: Allow a minimum of 7 days between application and harvest. It is not recommended that corn grown for seed be treated because a reduction in germination or vigor may result.

**Postharvest**

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-D or dicamba may be used.

Precautions, restrictions: Do not harvest or feed treated vegetation for 8 weeks following application.

**COTTON**

**Types of applications:** Preplant, preemergence, at-planting, hooded sprayer, selective equipment, spot treatment, preharvest. For Roundup Ready cotton, see the **ROUNDUP READY CROPS** section of this label.

**Preplant, Preemergence, 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.

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### **Hooded sprayer, Selective equipment**

Use instructions: This product may be applied through hooded sprayers, recirculating sprayers, shielded applicators or wiper applicators in cotton.

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. Allow at least 7 days between application and harvest.

### **Spot treatment**

Use instructions: For spot treatments, apply this product prior to boll opening of cotton.

Precautions, restrictions: Do not treat more than 10 percent 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.

### **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 12 fluid ounces to 3 pints of this product per acre for cotton regrowth inhibition. Allow a minimum of 7 days between final application and harvest of cotton or feeding of cotton forage or hay.

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 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 tanked mixed with DEF™ 6, Folex™, or Prep™ to provide additional enhancement of cotton leaf drop.

Precautions, restrictions: Applications up to 1.5 quarts per acre per year of this product may be applied by ground or air at preharvest timing. Do not exceed this amount. Do not apply to cotton grown for seed, as a reduction in germination or vigor may occur.

### **FALLOW SYSTEMS**

**Types of applications:** Chemical fallow, preplant fallow beds, aid to tillage.

#### **Chemical fallow**

Use instructions: This product may be applied during the fallow period prior to planting or emergence of any crop listed on this label. For any crop not listed on this label, applications must be made at least 30 days prior to planting. This product may be used as a substitute for tillage to control annual weeds in fallow fields. Also, broadcast or spot treatments will control annual 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 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, 9 fluid ounces of this product plus 2 to 4 oz. 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, shepherd's purse.

12 fluid ounces of this product plus 2 to 4 oz of Goal 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, sheperd's 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 6 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.

Precautions, restrictions: Tank mixtures with residual herbicides may result in reduced performance.

**GRAIN SORGHUM (MILO)**

**Type of applications:** Preplant, preemergence, at-planting, spot treatment, wiper applications, hooded sprayers, preharvest, postharvest.

**Preplant, Preemergence, 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, allow 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.

**Hooded Sprayers**

Use instructions: This product may be used through hooded sprayers for weed control between the rows of milo. Only hooded sprayers that completely enclose the spray pattern may be used.

When applying to milo that is grown on raised beds, ensure that the hood is designed to completely enclose the spray solution. If necessary, extend the front and rear flaps of the hoods to reach the ground in deep furrows.

Follow these requirements:

- The spray hoods must be operated on the ground or skimming across the ground.
- Do not apply more than 1.5 pints of this product per acre per application.
- Milo must be at least 12 inches tall, measured without extending leaves. Treat before milo sends tillers between the drill rows. If such tillers are contacted with the spray solution, the main plant may be killed.
- Leave at least an 8 inch untreated strip over the drill row. For example, if the crop row width is 38 inches, the maximum of the spray hood should be 30 inches.
- Maximum tractor speed: 5 mph.
- Maximum wind speed: 10 mph.
- Use low-drift nozzles.

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

Precautions, restrictions: Contact of this product in any manner to any vegetation to which treatment is not intended may cause damage. Such damage shall be the sole responsibility of the applicator. Do not graze or feed milo forage or fodder following applications of this product through hooded sprayers. Do not apply more than 4.5 pints of this product per acre per year for hooded sprayer applications.

**Preharvest**

Use instructions: Make applications at 30% grain moisture or less.

Precautions, restrictions: Do not apply more than 3.0 pints of this product per acre. Allow a minimum of 7 days between application and harvest of sorghum. It is not recommended that sorghum grown for seed be treated, as a reduction in germination or vigor may occur. The use of this product for preharvest grain sorghum (milo) is not registered in California.

**Postharvest**

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 1.5 pints of this product per acre for control, or 1.25 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, preemergence, renovation, site preparation, shielded sprayers, wiper applicators, spot treatments, creating rows in annual ryegrass.

**Preplant, Preemergence, Renovation, Site Preparation**

Use instructions: This product may be applied before, during, or after planting or renovation of turf or forage grass areas grown for seed production. Applications MUST be made prior to the emergence of the crop to avoid crop injury. 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 Bermuda grass, summer or fall applications provide best control.

Precautions, restrictions: Do not feed or graze treated areas for 8 weeks following application. 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.

**Shielded Sprayers**

Use instructions: Apply 1.5 pints to 4.5 pints of this product as a broadcast spray in 10 to 20 gallons of water per acre to control weeds in the rows. Uniform planting in straight rows aid in shielded sprayer applications. Best results are obtained when the grass seed crop is small enough to easily pass by or through the protective shields.

Precautions, restrictions: Contact of this product in any manner to any vegetation in which treatment is not intended may cause damage. Such damage shall be the sole responsibility of the applicator.

**Wiper Applications**

Precautions, restrictions: Contact of the herbicide solution with desirable vegetation may result in damage or destruction. Applicators should be adjusted so that the wiper contact point is at least 2 inches above the desirable vegetation. Weeds should be a minimum of 6 inches above the desirable vegetation. Better results may be obtained when more of the weed is exposed to the herbicide solution. Weeds not contacted by the herbicide solution will not be affected. This may occur in dense clumps, severe infestations, or when height of weeds varies so that not all weeds are contacted. In these instances, repeat treatments may be necessary. Better results may be obtained if 2 applications are made in opposite directions.

**Spot Treatments**

Use instructions: Use a ¾ to 1 ½ percent solution.

**Precautions, restrictions:** Apply this product prior to heading of grasses. Do not treat more than 10 percent of the total field to be harvested. The crop receiving the spray in the treated area will be killed. Take care to avoid drift or spray outside the target area for the same reason.

### **Creating Rows in Annual Ryegrass**

**Use instructions:** Use 12-24 fluid ounces of this product per acre mixed with water. Use the higher rate when the ryegrass is greater than 6 inches tall. Best results are obtained when applications are made before the ryegrass reaches 6 inches in height.

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

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

## **HERBS**

**Types of herbs:** Peppermint, spearmint.

**Use instructions:** This product may be used as a spot treatment in spearmint and peppermint. Apply as a spray-to-wet treatment 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 onto 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, Bermuda grass, bluegrass, brome, fescue, orchardgrass, ryegrass, timothy, wheatgrass, alfalfa and clover.

**Types of applications:** Spot treatment, wiper application, preplant, preemergence, 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, Preemergence 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, preemergence, 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, preemergence, 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 cranberries. Applications may be made to dry ditches in cranberry fields, but directed sprays around the base of the plants is not permitted. For wick or wiper applicators, mix 3 quarts of this product in 4 gallons of water. In severe infestations, reduce equipment ground speed to ensure that adequate amounts of this product are wiped on the weeds. A second treatment in the opposite direction may be beneficial.

Precautions, restrictions: Do not permit herbicide solution to contact desirable vegetation, including green shoots, canes or 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, preemergence, at-planting, spot treatment, preharvest, selective equipment. For Roundup Ready soybeans, see the **ROUNDUP READY CROPS** section of this label.

**Preplant, Preemergence 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 MAGNUM	LOROX/LINURON	PURSUIT PLUS
DUAL II MAGNUM	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 tall, and Pennsylvania smartweed up to 6 inches tall, apply this product at 1.5 pints per acre in these tank mixtures. For other labeled annual weeds, apply 12 fluid ounces to 18 ounces of this product per acre when weeds are less than 6 inches tall, and 1.5 to 2.25 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 percent 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.

**Preharvest**

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 4 QUARTS PER ACRE OF THIS PRODUCT FOR PREHARVEST APPLICATIONS. DO NOT APPLY MORE THAN 1.5 PINTS PER ACRE OF THIS PRODUCT 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, preemergence, spot treatment, fallow, hooded sprayers.

#### **Preplant, Preemergence**

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

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

#### **Spot treatment**

**Use instructions:** This product may be applied as a spot treatment in sugarcane. For control of volunteer or diseased sugarcane, make a  $\frac{3}{4}$  percent solution of this product in water and spray to wet the foliage of vegetation to be controlled. Volunteer or diseased sugarcane should have at least 7 new leaves.

**Precautions, restrictions:** Avoid spray contact with healthy 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 ratoon cane. For removal of last stubble of ratoon cane, apply 3 to 3  $\frac{3}{4}$  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 the rows of sugarcane. See the **APPLICATION EQUIPMENT AND TECHNIQUES** section of this label for guidance on the use of hooded sprayers.

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

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

**SUNFLOWERS**

**Types of applications:** Preplant, preemergence

Use instructions: This product may be applied before, during or after planting sunflowers. Application must be made prior to emergence of the crop.

A tank mixture with Prowl may be applied before, during or after planting in conventional tillage systems, into a cover crop, established sod or in previous crop residue.

Precautions, restrictions: Do not apply more than 24 fluid ounces (1.5 pints) of this product per acre for sunflowers. Make only one preplant or preemergent 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 row of trees), perennial grass suppression, selective equipment (except kiwi).

**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 and for general weed control in established citrus groves, tree fruit and tree nut orchards, and vineyards. Apply at rates given in the annual, perennial and woody brush tables. Repeat applications may be made up to a maximum of 8 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 rows of labeled tree and vine crops. If weeds are under drought stress, irrigate 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. 12 to 24 oz/A of this product plus 3 to 12oz/A of Goal 2XL will control annual weeds with a maximum height or diameter of 6 inches, including crabgrass, hairy fleabane (*Coryza bonariensis*), common groundsel, junglerice, common lambsquarters, redroot pigweed, London rocket, common ryegrass, sheperd's purse, annual sowthistle, common cheeseweed (malva), filaree (suppression), horseweed/marestail (*Coryza canadensis*), stinging nettle and common pursplane (suppression). 9 to 24 oz/A of this product plus 3 to 12 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:

- |                  |                     |
|------------------|---------------------|
| DEVRIINOL™ 50 DF | PRINCEP CALIBER™ 90 |
| DIREX™ 4L        | SIMAZINE 4L         |
| GOAL 2XL         | SIMAZINE 80W        |
| KARMEX DF        | SIM-TROL™ 4L        |
| KROVAR I         | SOLICAM™ DF         |
| KROVAR II        | SURFLAN™ AS         |
| PROWL            | SURFLAN 75W         |

Do not apply these tank mixtures in Puerto Rico.

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

Apply 12 fluid ounces to 7.5 pints 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, Bermuda grass, 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 6 fluid ounces of this product in 10 to 20 gallons of water per acre.

For suppression of Kentucky bluegrass covers, apply 4.5 fluid ounces of this product per acre. Do not add ammonium sulfate.

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

For suppression of vegetative growth and seedhead inhibition of bahiagrass for approximately 45 days, apply 4.5 fluid ounces of this product in 10 to 25 gallons of water per acre. Apply 1 to 2 weeks after full green-up or after mowing to a uniform height of 3 to 4 inches. This application must be made prior to seedhead emergence.

For suppression up to 120 days, apply 3 fluid ounces of this product per acre, followed by an application of 1.5 to 3 fluid ounces per acre about 45 days later. Make no more than 2 applications per year.

For burndown of Bermuda grass, apply 1.5 pints to 3 pints of this product in 3 to 20 gallons of water per acre. Use this treatment only if reduction of the Bermuda grass 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 Bermuda grass, apply 4.5 to 12 fluid ounces of this product per acre east of the Rocky Mountains and 12 fluid ounces of this product per acre west of the Rocky Mountains. Apply in a total spray volume of 3 to 20 gallons per acre, no sooner than 1 to 2 weeks after full green-up. If the Bermuda grass is mowed prior to application, maintain a minimum of 3 inches in height. Sequential applications may be made when regrowth occurs and Bermuda grass injury and stand reduction can be tolerated. East of the Rocky Mountains, rates of 4.5 to 7.5 fluid ounces per acre should be used in shaded conditions or where a lesser degree of suppression is desired.

### **Selective equipment (except kiwi)**

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

Precautions, restrictions: For citron and olives, apply as a post-directed spray only. Avoid painting cut stumps with this product as injury resulting from root grafting may occur in adjacent trees.

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

### **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), strips (in row of trees), selective equipment.

**NOTE:** For general use directions, see the **TREE, NUT AND VINE CROPS (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.

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 for peaches grown in 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 bark 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, quince.

Allow a minimum of 17 days between last application and harvest for apricot, cherry, nectarine, olive, peach, 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 CROPS (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, durian, figs, guava, jaboticaba, jackfruit, longan, lychee, mango, mangosteen, marmaladebox (genip), papaya, passion fruit, persimmon, pineapple, plantain, pomegranate, rambutan, sapodilla, sapote (black, mamey, white), soursop, sugar apple, tamarind, tea.

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 1 day between last application and harvest of banana, guava, papaya and plantain. Allow a minimum of 14 days between last application and harvest of acerola, atemoya, avocado, breadfruit, canistel, carambola, cherimoya, cocoa beans, coconuts, dates, figs, genip, jaboticaba, jackfruit, longan, lychee, mango, mayhaw, passion fruit, persimmon, pomegranate, sapodilla, sapote, soursop, sugar apple, tamarind, and tea. Allow a minimum of 28 days between last application and harvest of coffee.

Do not feed or graze treated pineapple forage following application.

## VEGETABLE CROPS

**Labeled crops:** Amaranth, arugula, artichoke (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. For Roundup Ready sugar beets, see the **ROUNDUP READY CROPS** section of this label.

Use instructions: This product may be applied prior to the emergence of direct seeded vegetables or prior to transplanting vegetables, except that for the following crops, apply only prior to planting. Allow at least 3 days between application and planting of cantaloupe, casaba melon, crenshaw melon, cucumber, eggplant, gherkin, gourds, ground cherry, honeydew melon, honey ball melon, mango melon, melons (all), muskmelon, pepper (all), persian melon, pumpkin, squash (summer, winter), tomatillo, watercress, and watermelon.

Precautions, restrictions: When applying this product prior to transplanting crops into plastic mulch, care must be taken to remove residues of this product, which could cause crop injury, from the plastic prior to transplanting. Residues can be removed by a single 0.5 inch application of water, either by natural rainfall or via a sprinkler system. Applications made at emergence will result in injury or death to emerged seedlings.

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

## VINE CROPS

**Labeled crops:** Grape (raisin, table, wine), kiwi fruit.

**Types of applications:** General weed control, middles (between rows), strips (in row), selective equipment.

**NOTE:** For general use directions, see the **TREE, NUT AND VINE CROPS (GENERAL)** section. The following directions are specific 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.

## ROUNDUP READY® CROPS

The following instructions include all applications that can be made onto Roundup Ready crops during the complete cropping season. Do NOT combine these instructions with other recommendations made for crop varieties that do not contain the Roundup Ready gene, in the **CROPS** section of this label.

Cheminova recommends use of this product for postemergence application only on crop varieties designated as containing the Roundup Ready gene.

Applying this product to crop varieties which are not designated as Roundup Ready will result in severe crop injury and yield loss. Avoid contact with foliage, green stems, or fruit of crops, or any

desirable plants which do not contain the Roundup Ready gene since severe injury or destruction will result.

The Roundup Ready designation indicates that the crop variety contains a patented gene which provides tolerance to Cheminova's Glyphos brand herbicides. Information on Roundup Ready crop varieties may be obtained from your seed supplier.

**SPRAY DRIFT MANAGEMENT**

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

See the **MIXING and APPLICATION EQUIPMENT AND TECHNIQUES** sections of this label for additional directions and restrictions on the application of this product.

DO NOT exceed a maximum of 24 fluid ounces per acre of this product when making applications by air unless otherwise directed. For aerial application in California, refer to the federal supplemental label for aerial applications for specific instructions, restrictions and requirements.

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

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

**NOTE:** The following recommendations are based on a clean start at planting by using a burn down application or tillage to control existing weeds before the crop emergence. In no-till and stale seedbed systems, a preplant burn-down treatment of 18 to 48 fluid ounces per acre of this product is recommended to control existing weeds prior to crop emergence.

There are not rotational crop restrictions following the application of this product.

**CANOLA WITH THE ROUNDUP READY GENE**

**Types of applications:** Preplant, preemergence, postemergence

Use instructions:

**Maximum Allowable Combined Application Quantities Per Season**

- 1. Preplant and preemergence applications                      48 fluid ounces per acre
- 2. Total in-crop application from emergence to 6 leaf        24 fluid ounces per acre

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

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

**Preplant or Preemergent Applications:** This product may be applied by aerial or ground application equipment prior to planting or emergence of canola.

**Over-the-top Applications:** This product may be applied by aerial or ground application equipment postemergence to Roundup Ready canola from emergence through six leaf stage of development. To maximize yield potential spray canola early to eliminate competing weeds. Any single over-the-top broadcast application should not exceed 10 fluid ounces per acre. No more than two over-the-top

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broadcast applications may be made from crop emergence through the six leaf stage of development. Sequential over-the-top applications of this product must be at least 10 days apart.

**Weeds Controlled:** For specific rates of application and instructions for control of various annual and perennial weeds, refer to the annual and perennial weed rate tables in this booklet.

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

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

Precautions, restrictions: See **ROUNDUP READY CROPS** section for general precautionary instructions for use in Roundup Ready crops. Allow a minimum of 60 days between last application and canola harvest. Do not use this product on canola with the Roundup Ready gene planted in the following states: Alabama, Delaware, Florida, Georgia, Kentucky, Maryland, New Jersey, North Carolina, South Carolina, Tennessee, Virginia and West Virginia.

**NOTE:** THIS PRODUCT IS NOT FOR USE ON CANOLA IN CALIFORNIA.

**CORN WITH THE ROUNDUP READY GENE**

**Types of applications:** Preplant, preemergence, at-planting, postemergence, spot treatment, postharvest.

**Application Instructions**

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

This product may be applied postemergence to Roundup Ready corn from emergence through the V8 (8 leaves with collars) or until corn height reaches 30 inches, whichever comes first. Single in-crop applications of this product are not to exceed 24 fluid ounces per acre. Sequential in-crop applications of this product from emergence through the V8 stage or 30 inches must not exceed 48 fluid ounces per acre per growing season.

**Maximum Allowable Application Rates**

- |   |                          |
|---|--------------------------|
| 1. Combined total per year for all applications   | 6 quarts per acre        |
| 2. Preplant, preemergence applications  | 3.75 quarts per acre     |
| 3. Total in-crop applications from emergence through the V8 stage or 30 inches  | 48 fluid ounces per acre |
| 4. Maximum preharvest application rate after maximum kernal fill is complete and the crop is physiologically mature (black layer formation) until 7 days before harvest | 24 fluid ounces per acre |

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 under hard water conditions, drought conditions or when tank mixed with Bullet®, Micro-Tech® or Partner® Herbicides. 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. Thoroughly rinse the spray system with clean water after use to reduce corrosion. The addition of other additives, including fertilizers and micronutrients are not recommended with this product since this may result in increased potential for crop injury.

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

For aerial applications: Use the recommended rates of this product in 3 to 15 gallons of spray solution per acre.

Precautions, restrictions: See **ROUNDUP READY CROPS** section for general precautionary instructions for use in Roundup Ready crops. Allow a minimum of 50 days between application of this product and harvest of corn forage and 7 days between application and harvest of corn grain. Allow a minimum of 10 days between in-crop applications of this product.

**Weed Control Recommendations**

Apply 18 to 24 fluid ounces of Glyphos Custom herbicide per acre for control of labeled grasses and broadleaf weeds in conventional and no-till corn production systems. Refer to the **ANNUAL WEED RATE TABLE** for rate recommendations for specific annual weeds. Glyphos Custom herbicide applied at up to 24 ounces per acre will control or suppress the growth of perennial weeds such as Bermuda grass, Canada thistle, common milkweed, field bindweed, hemp dogbane, horsenettle, nutsedge, quackgrass, rhizome johnsongrass, redvine, trumpetcreepr, swamp smartweed, and wirestem muhly. For additional information on perennial weeds, see the **PERENNIAL WEED RATE TABLE**.

Preemergence Followed by Postemergence Weed Control Program

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

Postemergence Only Weed Control Program

This product may be applied alone as a postemergence in-crop application to provide control of emerged weeds listed on the label. The postemergence application of this product should be made before the weeds reach a height and/or density that the weeds become competitive with the crop. If new flushes of weeds occur, a sequential application of this product at 18 to 24 fluid ounces per acre will control the labeled grasses and broadleaf weeds. This product may be applied postemergence to Roundup Ready corn from emergence through the V8 stage or until corn height reaches 30 inches (free standing), whichever comes first.

This product may be applied in tank mixtures with a labeled rate of Harness®, Harness® Xtra, Harness® Xtra 5.6L, Micro-Tech®, Bullet®, Partner®, Permit® or atrazine. Refer to the specific product label and observe all precautions and limitations on the label for all products used in tank mixtures, including application timing restrictions, soil restrictions, minimum recropping intervals and rotational guidelines – the more restrictive requirements apply.

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

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

**COTTON WITH THE ROUNDUP READY GENE**



**Types of applications:** Preplant, preemergence, at-planting, over-the-top, post-directed, hooded sprayer, preharvest.

**ATTENTION:** Cheminova recommends this product for use only over-the-top of or directed onto improved cotton varieties that are designated as cotton with the Roundup Ready® gene. SEVERE INJURY OR DEATH OF COTTON WILL RESULT IF ANY COTTON VARIETIES NOT PROPERLY DESIGNATED AS HAVING THE ROUNDUP READY® GENE ARE SPRAYED WITH THIS PRODUCT.

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

Use instructions

**Maximum Allowable Yearly Rates**

- |  |                      |
|--|----------------------|
| 1. Combined total per year for all applications      | 6 quarts per acre    |
| 2. Preplant, preemergence applications               | 3.75 quarts per acre |
| 3. Total in-crop applications from cracking to layby | 3 quarts per acre    |
| 4. Maximum preharvest application rate               | 1.5 quarts per acre  |

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

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

Precautions, restrictions: See **ROUNDUP READY CROPS** section for general precautionary instructions for use in Roundup Ready crops. The combined total application from crop emergence until harvest must not exceed 4.5 quarts per acre.

**Over-the-top Applications:** This product may be applied by aerial or ground application equipment postemergence to Roundup Ready cotton from the ground cracking stage until the four leaf (node) stage of development (until the fifth true leaf reaches the size of a quarter). Over-the-top applications made after the four leaf (node) stage of development may result in boll loss, delayed maturity and/or yield loss. Any single over-the-top broadcast application should not exceed 24 fluid ounces per acre. No more than two over-the-top broadcast applications may be made from crop emergence through the four leaf (node) stage of development. Sequential over-the-top applications of this product must be at least 10 days apart and cotton must have at least two nodes of incremental growth between applications.

**Post-directed or Hooded Applications.** This product may be applied using precision post-directed or hooded sprayers to Roundup Ready cotton through layby. At this stage, post-directed equipment should be used which directs the spray to the base of the cotton plants. Contact of the spray with cotton leaves should be avoided to the maximum extent possible. To minimize spray onto the leaves of the cotton plants, place nozzles in a low position directing a horizontal spray pattern under the cotton leaves to contact weeds in the row, and maintain low spray pressure (less than 30 PSI). For best results, make applications while weeds are small (less than 3 inches). Any single post-directed application should not exceed 24 fluid ounces per acre of this product. No more than two applications should be made from the fifth leaf through layby. Sequential in-crop applications of this product must be at least 10 days apart and cotton must have at least two nodes of incremental growth between applications.

**ATTENTION:** USE OF GLYFOS CUSTOM IN ACCORDANCE WITH LABEL DIRECTIONS IS EXPECTED TO RESULT IN NORMAL GROWTH OF ROUNDUP READY COTTON, HOWEVER, VARIOUS ENVIRONMENTAL CONDITIONS, AGRONOMIC PRACTICES AND OTHER FACTORS MAKE IT IMPOSSIBLE TO ELIMINATE ALL RISKS ASSOCIATED WITH THIS PRODUCT, EVEN WHEN APPLICATIONS ARE MADE IN CONFORMANCE WITH THE LABEL SPECIFICATIONS. IN

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SOME CASES, THESE FACTORS CAN RESULT IN BOLL LOSS, DELAYED MATURITY AND/OR YIELD LOSS.

**Salvage Treatment.** This treatment may be used after the four leaf stage of development and should only be used where weeds threaten to cause the loss of the crop. 24 fluid ounces per acre may be applied either as an over-the-top application or as a post-directed treatment sprayed higher on the cotton plants and over the weeds. **NOTE: SALVAGE TREATMENTS WILL RESULT IN SIGNIFICANT BOLL LOSS, DELAYED MATURITY AND/OR YIELD LOSS. NO MORE THAN ONE SALVAGE TREATMENT SHOULD BE USED FOR GROWING SEASON.**

**Weeds Controlled.** For specific rates of application and instructions for control of specific weed species, refer to the annual and perennial weed rate tables in this booklet. Glyphos Custom applied at 24 fluid ounces per acre will burndown or suppress the growth of the following perennial weeds and reduce crop competition: yellow and purple nutsedge, rhizome johnsongrass, common Bermuda grass, silverleaf nightshade, trumpet creeper, and redvine. Fall preharvest applications may be required for control of these perennial weeds. Some weeds with multiple germination times or suppressed (stunted) weeds may require sequential applications of this product for control.

**Preharvest Applications.** This product may be applied for preharvest annual and perennial weed control as a broadcast treatment to Roundup Ready cotton after 20% boll crack. Allow a minimum of 7 days between final application and harvest of cotton or feeding of cotton forage or hay. **NOTE:** Glyphos Custom will not enhance the performance of harvest aids when applied to Roundup Ready cotton. **DO NOT** apply Glyphos Custom preharvest to crops grown for seed.

**SOYBEANS WITH THE ROUNDUP READY GENE**

**Types of applications:** Preplant, preemergence, at-planting, postemergence, preharvest, postharvest

Use instructions: When applied as directed, this product will control labeled annual grasses and broadleaf weeds in Roundup Ready soybeans. Many perennial grasses and broadleaf weeds will be controlled or suppressed with one or more applications of this product.

**Maximum Allowable Application Rates**

- |  |                          |
|--|--------------------------|
| 1. Combined total per year for all applications                  | 6 quarts per acre        |
| 2. Preplant, preemergence applications                           | 3.75 quarts per acre     |
| 3. Total in-crop applications from cracking throughout flowering | 2.25 quarts per acre     |
| 4. Maximum preharvest application rate                           | 24 fluid ounces per acre |

Precautions, restrictions: See **ROUNDUP READY CROPS** sections for general precautionary instructions for use in Roundup Ready crops. The combined total application from crop emergence through harvest must not exceed 2.25 quarts per acre. The maximum rate for any single in crop application is 48 fluid ounces per acre. The maximum combined total of this product which can be applied during flowering is 48 fluid ounces per acre. Allow a minimum of 14 days between final application and harvest or feeding of soybean grain, forage or hay.

**NOTE:** The use of this product for in-crop applications over Roundup Ready soybeans is not registered in California.

**ANNUAL WEEDS RATE RECOMMENDATIONS**

The following rate recommendations will provide control of labeled grasses and broadleaf weeds in conventional and no-till Roundup Ready soybean production systems. Refer to the **ANNUAL WEED RATE TABLES** in this label for rate recommendations for specific annual weeds.

Cheminova will not warrant crop safety or weed control when Roundup Ready soybeans are treated with herbicides not specified on this label. Because of the potential for; 1) crop injury, 2) poor weed control from antagonism, and/or 3) rotational crop restrictions, herbicides not specified on this label

should not be used, whether applied preemergence or applied postemergence as a tank mixture with Roundup Custom herbicide.

This product may be used up to 48 fluid ounces per acre in any single in-crop application for control of annual weeds, where heavy weed densities exist.

**MIDWEST/MID-ATLANTIC RECOMMENDATIONS**

**Narrow row or drilled soybeans:** A single in-crop application of this product will provide effective control of labeled weeds. For best results, an initial application of 24 fluid ounces per acre, on 4 – 8” weeds is recommended. Weeds will generally be 4 – 8” tall 3 to 5 weeks after planting. If the initial application is delayed and weeds are 8 – 18” tall, use 36 fluid ounces per acre for best results.

Under adverse growing conditions such as drought, hail, wind damage or a poor soybean stand that slows or delays canopy closure, a sequential application of this product at 18 to 24 fluid ounces per acre may be necessary to control late flushes of weeds.

**Wide row soybeans:** An in-crop application of this product will provide effective control of the initial stand of labeled weeds. For best results, an initial application of 24 fluid ounces per acre, on 4 – 8” weeds are recommended. Weeds will generally be 4 – 8” tall 3 to 5 weeks after planting. If new flushes of weeds occur, they can be controlled by sequential applications of this product.

**Initial and Sequential (if needed) Applications**

Weed Height (inches)	Rate (fl oz/A)
1-3	18
4-8	24
8-18	36

Giant ragweed: Apply 24 fluid ounces per acre when the weed is 8 – 12” tall to avoid the need for sequential application.

Black nightshade, Pennsylvania smartweed, ladythumb smartweed, velvetleaf and waterhemp: Apply 24 fluid ounces per acre when the weeds 3 – 6” tall and 36 fluid ounces per acre when the weeds are up to 12 inches tall. For morningglory species apply 24 fluid ounces per acre when weeds are up to 4 inches tall, and 36 fluid ounces per acre when weeds are up to 6 inches tall.

Some weeds, such as black nightshade, woolly cupgrass, shattercane, wild proso millet, burcumber, and giant ragweed, with multiple germination times may require a sequential application of this product. Suppressed or stunted weeds may also require sequential applications. Sequential applications should be made after some regrowth has occurred. Use a minimum of 18 fluid ounces of this product per acre for sequential applications.

**SOUTHEAST RECOMMENDATIONS**

Narrow row, drilled, or wide-row soybeans: An in-crop application of this product will provide effective control of the initial stand of labeled weeds. For best results, an initial application of 24 fluid ounces per acre, on 3 – 6” weeds is recommended. Weeds will generally be 3 – 6” tall 2 to 3 weeks after planting.

**Initial Treatment**

Weed Height (inches)	Rate (fl oz/A)
3-6	24
6-12	36

Under adverse growing conditions such as drought, hail, wind damage or a poor soybean stand that slows or delays canopy closure, a sequential application of this product at 12 to 24 fluid ounces per acre may be necessary to control late flushes of weeds.

**Sequential Application (if needed)**

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Weed Height (inches)	Rate (fl oz/A)
2-3	12
3-6	18
6-12	24

Florida pusley, hemp sesbania and spurred anoda: Apply 24 fluid ounces per acre to weeds 2 – 4" for the initial application. Apply 24 fluid ounces per acre when these weeds are 3 – 6" tall if sequential application is necessary.

Morningglory, black nightshade, groundcherry, and Pennsylvania smartweed: Apply 18 fluid ounces per acre on 1 – 3" weeds, 24 fluid ounces per acre on 3 – 6" weeds or 36 fluid ounces per acre on 6 – 12" weeds for the initial application.

Some weeds, such as black nightshade, broadleaf signalgrass, Texas panicum, burcumber, and sicklepod, with multiple germination times may require a sequential application of this product. Suppressed or stunted weeds may also require sequential applications. Sequential applications should be made after some regrowth has occurred. Use a minimum of 12 fluid ounces of this product per acre for sequential applications.

**DELTA/MID-SOUTH RECOMMENDATIONS**

**Narrow row, drilled, or wide row soybeans:** An in-crop application of this product will provide effective control of the initial stand of labeled weeds. A sequential application will be required to control new flushes of weeds. For best results, an initial application of 24 fluid ounces per acre, on 2 – 4" weeds is recommended. Weeds will generally be 2 – 4 " tall 2 to 3 weeks after planting.

**Initial Treatment**

Weed Height (inches)	Rate (fl oz/A)
2-4	24
5-12	36

**Sequential Application**

Weed Height (inches)	Rate (fl oz/A)
2-3	12
3-6	18
6-12	24

Hemp sesbania and spurred anoda: Apply a sequential treatment of 24 fl ounces per acre on 3 – 6" weeds if necessary.

Some weeds, such as black nightshade, broadleaf signalgrass, Texas panicum, burcumber, and sicklepod, with multiple germination times may require a sequential application of this product. Suppressed or stunted weeds may also require sequential applications. Sequential applications should be made after some regrowth has occurred. Use of minimum of 12 fluid ounces of this product per acre for sequential applications.

**PERENNIAL WEEDS RATE RECOMMENDATIONS**

A 24 to 48 fluid ounces per acre rate (single or multiple applications) of this product will control or suppress perennial weeds such as Bermuda grass, Canada thistle, common milkweed, field bindweed, hemp dogbane, horsenettle, marestail (horseweed), nutsedge, quackgrass, rhizome johnsongrass, redvine, trumpetcreeper, swamp smartweed, and wirestem muhly.

For best results, allow perennial weed species to achieve at least 6" of growth before spraying with Glyphos Custom herbicide.

**NONCROP USES**

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This product may be used to control the weeds listed on this label in terrestrial noncrop sites within these areas: airports; golf courses; highways; industrial plant sites; lumberyards; natural areas; parking areas; parks; petroleum tank farms; pipeline, power, telephone and utility rights-of way; pumping installations; railroads; roadsides; schools; storage areas.

**FARMSTEADS**

**Types of applications:** General nonselective weed control, trim-and-edge, greenhouse/shadehouse, chemical mowing, cut stumps, habitat management.

**GENERAL NONSELECTIVE WEED CONTROL, TRIM-AND-EDGE, GREENHOUSE/SHADEHOUSE**

Use instructions: This product may be used to control annual weeds, perennial weeds and woody brush which are found in any part of the farmstead, including building foundations, along and in fences, in dry ditches and canals, along ditchbanks, 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 applications rates. For annual weeds, use 1.5 pints per acre of this product when weeds are less than 6 inches tall and 2.25 pints per acre when weeds are greater than 6 inches tall. For perennial weeds, apply 3 to 7.5 pints per acre in these tank mixes. For tank mixes 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.

- |                 |                |
|-----------------|----------------|
| Arsenal         | Plateau        |
| Banvel          | Princep DF     |
| Barricade 65WG  | Princep Liquid |
| Diuron          | Ronstar 50 WP  |
| Endurance       | Sahara         |
| Escort          | Simazine       |
| Karmex DF       | Surflan        |
| Krovar I DF     | Telar          |
| Oust            | Vanquish       |
| Pendulum 3.3 EC | 2,4-D          |
| Pendulum WDG    |                |

Banvel mixtures may not be applied by air in California.

**Greenhouse/Shadehouse**

This product may be used to control weeds in and around greenhouses and shadehouses. Desirable vegetation must not be present during application and air circulation fans must be turned off.

**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 4.5 - 6 fluid ounces per acre. Use 6 fluid ounces of this product per acre when treating tall fescue, fine fescue, orchardgrass, or quackgrass covers. Use 4.5 fluid ounces of this product per acre when treating Kentucky bluegrass. Apply treatments in 10 to 20 gallons of spray solutions 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 noncrop site listed on this label.

Use instructions: This product will control regrowth of cut stumps and resprouts of many types of woody brush and tree species, some of which are listed below. Apply this product using suitable equipment to ensure coverage of the entire cambium. Cut trees or resprouts close to the soil surface. Apply a 50 to 100 percent solution of this product to the freshly-cut surface immediately after cutting.

Delays in application may result in reduced performance. For best results, applications should be made during periods of active regrowth and full leaf expansion.

- |             |            |
|-------------|------------|
| Alder       | Salt-cedar |
| Eucalyptus  | Sweetgum   |
| Madrone     | Tan Oak    |
| Oak         | Willow     |
| Reed, giant |            |

**Precautions, restrictions:** DO NOT make cut stump applications when the roots of desirable woody brush or trees may be grafted to the roots of the cut stump. Injury resulting from root grafting may occur in adjacent woody brush 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 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 treatment 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 perennial 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.

**FORESTRY SITE PREPARATION AND UTILITY RIGHTS-OF-WAY**

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

In forestry, this product is recommended for use in site preparation prior to planting any tree species, including Christmas trees and silvicultural nursery sites.

In utilities, this product is recommended for use along electrical power, pipeline and telephone rights-of-way, and in other utility sites associated with these rights-of-way, such as substations.

**APPLICATION RATES AND TIMING**

APPLICATION	GLYFOS CUSTOM HERBICIDE	SPRAY VOLUME
<b>BROADCAST</b>		
Aerial	1.5 to 7.5 qts./A	5 to 30 gal./A
Ground	1.5 to 7.5 qts./A	10 to 60 gal./A
<b>SPRAY-TO-WET</b>		
Handgun, Backpack, Mistblower	0.6 % to 2% by volume	spray-to-wet
<b>LOW VOLUME DIRECTED SPRAY</b>		
Handgun, Backpack, Mistblower	4% to 7.5% by volume	partial coverage*

\*For low volume directed spray applications, coverage should be uniform with at least 50 percent of the foliage contacted. Coverage of the top one-half is important for best results.

In forestry site preparation and utility rights-of-way applications, this product requires use with a nonionic surfactant. Use a nonionic surfactant with greater than 80 percent active ingredient and

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labeled for use with herbicides. Use of this product without surfactant will result in reduced performance. See the **MIXING** section this label for more information.

Mix 2 or more quarts of the nonionic surfactant per 100 gallons of spray solution (0.5 percent or more by spray volume). Use of surfactant concentrations greater than 1.5 percent by spray volume with handgun applications or 2.5 percent by spray volume with broadcast applications is not recommended.

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

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

This product has no herbicidal or residual activity in the soil. Where repeat applications are necessary, do not exceed 8 quarts of this product per acre per year.

**TANK MIXTURES**

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

**NOTE:** For forestry site preparation, make sure the tank-mix product is approved for use prior to planting the desired species. Observe planting interval restrictions. For side trimming treatments in utility rights-of-way, tank mixtures with Arsenal™ 2WSL are not recommended. For side trimming treatments, it is recommended that this product be used alone as recommended, or as a tank mixture with Garlon™4.

PRODUCT	BROADCAST RATE	USE SITES
Arsenal™ Applicators Concentrate**	2 to 16 fl oz/a	Forestry site preparation
Chopper™	4 to 32 oz/a	Forestry site preparation
Escort™**	½ to 3 ½ oz/a	Forestry site preparation
Oust™	1 to 3 oz/a	Forestry site preparation, Utility sites
Garlon™3A* Garlon 4	1 to 4 qts/a	Forestry site preparation, Utility sites
Arsenal 2WSL**	4 to 32 fl oz/a	Utility sites

PRODUCT	SPRAY-TO-WET RATES	USE SITES
Arsenal Applicators Concentrate**	1/32% to ½% by volume	Forestry site preparation
Arsenal 2WSL**	1/16% to ½% by volume	Utility sites

PRODUCT	LOW VOLUME DIRECTED SPRAY RATES	USE SITES
Arsenal Applicators Concentrate**	1/8% to ½% by volume	Forestry site preparation
Arsenal 2WSL**	1/8% to ½% by volume	Utility sites

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\*Ensure that Garlon 3A is thoroughly mixed with water according to label directions before adding this product. Have spray mixture agitating at the time this product is added to avoid spray compatibility problems.

\*\*Arsenal and Escort™ are not registered in the state of California.

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

**FORESTRY CONIFER AND HARDWOOD RELEASE DIRECTED SPRAY AND SELECTIVE EQUIPMENT**

This product may be applied as a directed spray or by using selective equipment in forestry conifer and hardwood sites, including Christmas tree plantations and silvicultural nurseries. Mix 2 to 6 quarts of a nonionic surfactant per 100 gallons of spray solution (0.5 to 1.5 percent by spray volume) for all spray applications. Use a surfactant with greater than 80 percent active ingredient.

In hardwood plantations, tank mixtures with Oust may be used. In pine plantations, tank mixtures with Garlon 4 or Arsenal AC may be used. Comply with all site restrictions, forestry species limitations and precautions on the tank mix product label.

Avoid contact of spray, drift, mist or drips with foliage, green bark or non-woody surface roots of desirable species.

See all sections in the **APPLICATION EQUIPMENT AND TECHNIQUES** portion of this label for specific equipment recommendations and precautions.

For spray-to-wet applications, use a 1.5 percent spray solution for the control of undesirable woody brush and trees. To control herbaceous weeds, use a 0.75 to 1.5 percent solution.

For low volume directed spray applications, use a 4 to 7.5 percent spray solution. Coverage should be uniform with at least 50 percent of the foliage contacted. Coverage of the top one-half of the unwanted vegetation is important.

For equipment calibrated for broadcast applications, use 1.5 to 7.5 quarts of this product per acre. Apply in 10 to 60 gallons of clean water per acre. Shielded application equipment may be used to avoid contact of the spray solution with desirable plants. Shields should be adjusted to prevent spray contact with the foliage or green bark of desirable vegetation.

Wiper application equipment may be used. See the **SELECTIVE EQUIPMENT** portion of this label for equipment and rate recommendations.

**BROADCAST SPRAY**

Except where specifically recommended below, use only where conifers have been established for more than one year.

APPLICATION MUST BE MADE AFTER FORMATION OF FINAL CONIFER RESTING BUDS IN THE FALL OR PRIOR TO INITIAL BUD SWELLING IN THE SPRING.

Injury may occur to conifers treated for release, especially where spray patterns overlap or the higher rates are applied. Damage can be accentuated if applications are made when conifers are actively growing, or are under stress from drought, floodwater, improper planting, insects, animal damage or diseases.

This product may require use with a surfactant. Unless otherwise recommended in this section of this label, use Entry™ II surfactant at 10 to 30 fluid ounces per acre. Follow the instructions under the **MIXING** section of this label.

For release of the following conifer species outside the Southeastern United States:



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**Douglas fir**  
*Pseudotsuga menziesii*  
**Fir**  
*Abies spp.*  
**Hemlock\*\***  
*Tsuga spp.*

**Pines\***  
*Pinus spp.*  
**Redwood, California\*\***  
*Sequoia spp.*  
**Spruce**  
*Picea spp.*

\* Includes all species except loblolly pine, longleaf pine, shortleaf pine or slash pine.

\*\* Use of a surfactant is not recommended for release of hemlock species or California redwood. In mixed conifer stands, injury to these species may result if a surfactant is used.

Apply 0.75 to 1.5 quarts of this product per acre as a broadcast spray.

**NOTE:** For release of Douglas fir with this product or recommended tank mixtures of this product, Entry II or a nonionic surfactant recommended for over-the-top foliar sprays may be used. To avoid possible conifer injury, Entry II rates should not exceed 20 fluid ounces per acre at elevations above 1500 feet, or 10 fluid ounces per acre in the coastal range or at elevations below 1500 feet in Washington and Oregon. Nonionic surfactants may be used at 2 fluid ounces per acre at elevations above 1500 feet, or 1 fluid ounce per acre in the coastal range or at elevations below 1500 feet. Use of surfactant rates exceeding those listed above may result in unacceptable conifer injury and are not recommended. Ensure that the nonionic surfactant has been adequately tested for Douglas fir safety before use.

In Maine, up to 2.25 quarts per acre of this product or a tank mix with 1 oz/a of Arsenal Applicators Concentrate may be used for the control of difficult species.

To release Douglas fir, pine and spruce species at the end of the first growing season (except in California), apply 0.75 to 1.125 quarts of this product per acre. Ensure that the conifers are well hardened off.

**Oust Tank Mixtures** – To release jack pine, white pine and white spruce, apply 0.75 to 1.5 quarts of this product with 1 to 3 ounces (1 to 1.5 for white pine) of Oust per acre. Make applications to actively growing weeds as a broadcast spray over the top of established conifers. Applications at these rates should be made after formation of conifer resting buds in the later summer or fall.

**Arsenal Applicators Concentrate Tank Mixtures** – This product may be tank mixed with Arsenal Applicators Concentrate for release of Douglas fir. Use 0.75 to 1.125 quarts of this product tank mixed with 2 to 6 fluid ounces of Arsenal per acre. For release of balsam fir and red spruce, apply a mixture of 1.5 quarts of this product and 1 to 2.5 fluid ounces of Arsenal Applicators Concentrate per acre.

For release of the following conifer species in the Southeastern United States:

**Eastern white pine**  
*Pinus strobus*  
**Loblolly pine**  
*Pinus taeda*  
**Longleaf pine**  
*Pinus palustris*

**Shortleaf pine**  
*Pinus echinata*  
**Slash pine**  
*Pinus elliottii*  
**Virginia pine**  
*Pinus virginiana*

Apply 1.125 to 1.875 quarts of this product per acre as a broadcast spray during late summer or early fall after the conifers have hardened off. For applications at the end of the first growing season, use 0.75 quart per acre of this product alone or in a recommended tank mixture.

**Arsenal Applicators Concentrate Tank Mixtures** – Apply 0.75 to 1.5 quarts of this product with 2 to 16 fluid ounces of Arsenal Applicators Concentrate per acre as a broadcast spray for conifer release. Use only on conifer species that are labeled for over-the-top sprays for both products. Use the higher recommended rates for dense, tough-to-control woody brush and trees.

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

**HERBACEOUS RELEASE**

When applied as directed, this product plus listed residual herbicides provides postemergence control of the annual weeds and control or suppression of the perennial weeds listed in this label, and residual control of the weeds listed in the residual herbicide label. Make applications to actively growing weeds as a broadcast spray over the top of labeled conifers.

**Oust tank mixture** – To release loblolly pines, apply 12 to 18 fluid ounces of this product, plus 2 to 4 ounces of Oust per acre. To release slash pines, apply 9 to 12 fluid ounces of this product, plus 2 to 4 ounces of Oust per acre.

Mix up to 3.2 fluid ounces per acre of Entry II with the recommended rate of this product plus Oust. Applications can be made over newly planted pines after the emergence of herbaceous weeds in the spring or early summer. Best results are obtained from applications made in May and June.

Weed control may be reduced if water volumes exceed 25 gallons per acre for these treatments.

**Atrazine tank mixtures** – To release Douglas fir, apply 0.75 quart of this product, plus 4 pounds active ingredient of atrazine per acre. Apply only over Douglas fir that has been established for at least one full growing season. Apply in the early spring, usually mid-March through early April. Injury will occur if applications are made after bud swell in the spring. Do not add surfactant to this mix for this use.

Always read and follow the manufacturer's label recommendations for all herbicides and surfactants used.

**WETLAND SITES**

This product may be used in and around water (aquatic areas) and wetlands found in forestry and in power, telephone and pipeline rights-of-way sites, including where these sites are adjacent to or surrounding domestic water supply reservoirs, supply streams, lakes and ponds. Read and observe the following before making applications in and around water.

Consult local public water control authorities before applying this product in and around public water. Permits may be required to treat in such areas.

There is no restriction on the use of treated water for irrigation, recreation or domestic purposes.

**NOTE:** Do not apply this product directly to water within ½ mile up-stream of an active potable water intake in flowing water (i.e., river, stream, etc.) or within ½ mile of an active potable water intake in a standing body of water such as lake, pond or reservoir. To make aquatic applications around and within ½ mile of active potable water intakes, the water intake must be turned off for a minimum period of 48 hours after the application. These aquatic applications may be made **ONLY** in those cases where there are alternative water sources or holding ponds which would permit the turning off of an active potable water intake for a minimum period of 48 hours after the applications. This restriction does not apply to intermittent or inadvertent overspray of water in terrestrial use sites.

Do not spray open bodies of water where woody brush, trees and herbaceous weeds do not exist. The maximum application rate of 3.75 quarts per acre must not be exceeded in a single over-water broadcast application except as follows, where any recommended rate may be applied:

- Stream crossings in utility rights-of-way
- Where applications will result in less than 20 percent of the total water area being treated.

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

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 weeds.

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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 36 fluid ounces per acre, this product may be used up to 36 fluid ounces per acre where heavy weed densities exist.

**ANNUAL WEEDS RATE TABLE**

WEED SPECIES	RATE (FLUID OUNCES PER ACRE)				
	12	18	24	30	36
	MAXIMUM HEIGHT/LENGTH				
Annoda, spurred	-	2"	3"	5"	8"
Barley	18"	18"+	-	-	-
Barnyardgrass	-	3"	6"	7"	9"
Bassia, fivehook	-	-	6"	-	-
Bittercress	12"	20"	-	-	-
Bluegrass, annual	10"	-	-	-	-
Bluegrass, Bulbous	6"	-	-	-	-
Brome, downy <sup>1,2</sup>	6"	12"-	-	-	-
Brome, Japanese	6"	12"	24"	-	-
Browntop panicum	6"	8"	12"	-	24"
Buckwheat, wild <sup>3</sup>	-	1"	2"	-	-
Burcucumber	6"	12"	18"	-	-
Buttercup	12"	20"	-	-	-
Carolina foxtail	10"	-	-	-	-
Carolina geranium	-	-	4"	-	9"
Carpetweed	-	6"	12"	-	-
Cheat <sup>2</sup>	6"	20"	-	-	-
Chervil	20"	-	-	-	-
Chickweed	-	12"	18"	-	-
Cocklebur	12"	18"	24"	-	36"
Copperleaf, hophornbeam	-	2"	4"	-	6"
Copperleaf, Virginia	-	2"	4"	-	6"
Corn	6"	12"	20"	-	-
Corn speedwell	12"	-	-	-	-
Crabgrass	6"	12"	18"	-	-
Cutleaf evening primrose	-	-	3"	-	6"
Devilsclaw (unicorn plant)	-	3"	6"	-	-
Dwarf dandelion	12"	-	-	-	-
Eastern mannagrass	8"	12"	-	-	-
Eclipta	-	4"	8"	12"	-
Fall panicum	4"	6"	8"	12"	24"
Falsedandelion	-	20"	-	-	-
Falsesflax, smallseed	12"	-	-	-	-
Fiddleneck	-	6"	12"	-	-
Field pennycress	6"	12"	-	-	-
Filaree	-	-	6"	-	12"
Fleabane, annual	6"	20"	-	-	-
Fleabane, hairy ( <i>Conyza bonariensis</i> )	-	-	6"	-	10"
Fleabane, rough	3"	6"	12"	-	-
Florida pusley	-	-	4"	-	6"
Foxtail	6"	12"	20"	-	-
Goatgrass, jointed	6"	12"	-	-	-
Goosegrass	3"	5"	8"	-	18"
Grain sorghum (milo)	6"	12"	20"	-	-
Groundsel, common	-	6"	10"	-	-
Hemp sesbania	-	2"	4"	6"	8"
Henbit	-	-	6"	-	12"

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Horseweed/marestail ( <i>Conyza canadensis</i> )	6"	12"	18"	-	-
Itchgrass	6"	12"	18"	-	-
Jimsonweed	-	-	12"	-	18"
Johnsongrass, seedling	-	12"	18"	-	24"
Junglerice	-	3"	6"	7"	9"
Knotweed	3"	8"	12"	-	20"
Kochia <sup>4</sup>	-	3 to 6"	12"	-	-
Lambquarters	6"	8"	12"	-	20"
Little barley	12"	-	-	-	-
London rocket	6"	-	24"	-	-
Mayweed	-	2"	6"	12"	18"
Morningglory, annual ( <i>Ipomoea spp.</i> )	-	2"	3"	4"	6"
Mustard, blue	6"	12"	18"	-	-
Mustard, tansy	6"	12"	18"	-	-
Mustard, tumble	6"	12"	18"	-	-
Mustard, wild	6"	12"	18"	-	-
Nightshade, black	-	4"	8"	-	-
Nightshade, hairy	-	4"	8"	-	-
Oats	-	6"	20"	-	-
Pigweed species	-	12"	18"	24"	-
Prickly lettuce	-	6"	12"	-	-
Purslane	-	6"	8"	-	12"
Ragweed, common	-	6"	12"	-	18"
Ragweed, giant	-	4"	9"	-	18"
Red rice	-	-	4"	-	-
Russian thistle	-	6"	12"	-	-
Rye, cereal <sup>2</sup>	6"	18"	18"+	-	-
Ryegrass	-	-	6"	-	12"
Sandbur, field	6"	12"	-	-	-
Shattercane	12"	18"	-	-	-
Shepherd's purse	6"	12"	-	-	-
Sicklepod	-	2"	4"	-	8"
Signalgrass, broadleaf	-	3"	6"	7"	9"
Smartweed, ladythumb	-	-	6"	-	9"
Smartweed, Pennsylvania	-	-	6"	-	9"
Sowthistle, annual	-	-	6"	-	12"
Spanish needles	-	-	8"	-	18"
Speedwell, purslane	12"	-	-	-	-
Sprangletop	6"	12"	20"	-	-
Spurge, prostrate	-	6"	12"	-	-
Spurge, spotted	-	6"	12"	-	-
Spurry, umbrella	6"	-	-	-	-
Stinkgrass	-	12"	-	-	-
Sunflower	12"	18"	-	-	-
Teaweed/prickly sida	-	2"	4"	-	6"
Texas panicum	6"	8"	12"	-	24"
Velvetleaf	-	3"	6"	-	12"
Virginia pepperweed	-	18"	-	-	-
Waterhemp	-	3"	6"	-	12"
Wheat <sup>2</sup>	6"	12"	18"	-	-
Wheat (overwintered)	-	6"	12"	18"+	-
Wild oats	6"	20"	-	-	-
Wild proso millet	-	6"	12"	-	18"
Witchgrass	-	12"	-	-	-
Woolly cupgrass	-	6"	12"	-	-
Yellow rocket	-	12"	20"	-	-

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<sup>1</sup>For control of downy brome in no-till systems, use 18 fluid ounces per acre.

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

<sup>3</sup>Use 18 fluid ounces per acre of this product to control wild buckwheat in the cotyledon to 2-leaf stage. Use 24 fluid ounces per acre to control 2 to 4-leaf wild buckwheat. For improved control of wild buckwheat over 2 inches in size, use sequential treatments of 24 fluid ounces followed by 24 fluid ounce of this product per acre.

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

**Annual Weeds—10 to 40 Gallons per Acre in Water**

Apply 1½ pints to 2¼ pints of this product per acre. Use 1½ pints per acre if weeds are less than 6 inches tall and 2¼ pints 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**

9 to 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 the following weeds with the maximum height or length indicated: 6" – prickly lettuce, marestail/horseweed (*Conyza canadensis*), morningglory (*Ipomoea* spp.), kochia (Banvel only); 12" – cocklebur, lambsquarters, pigweed, Russia thistle.

12 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 a maximum height or length of 6 inches: common ragweed, giant ragweed, Pennsylvania smartweed, and velvetleaf.

9 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 tank mixtures by air in California.

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

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 recommended stages.

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

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

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

Weed Species	Rate PT/A	Water Volume	Hand-Held % Solution	Comments
Alfalfa	1.5-3	3-10	1.5%	Make applications after the last hay cutting in the fall. Allow alfalfa to regrow to a height of 6 to 8 inches or more prior to treatment. Applications should be followed with deep tillage at least 7 days after treatment, but before soil freeze-up.
Alligatorweed	6	3-20	1.25%	Partial control. Apply when most of the plants are in bloom. Repeat applications will be required to maintain control.
Anise (fennel)	--	--	.75-1.5%	Apply as a spray-to-wet treatment. Optimum results are obtained when plants

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				are treated at the bud to full-bloom stage of growth.
Bahiagrass	4.5-7.5	3-20	1.5%	Apply when most plants have reached the early head stage.
Bentgrass	2.25	10-20	1.5%	For suppression in grass seed production areas. For ground applications only. Ensure entire crown area has resumed growth prior to a fall application. Bentgrass should have at least 3 inches of growth. Tillage prior to treatment should be avoided. Tillage 7 to 10 days after application is recommended for best results.
Bermuda grass	4.5- 7.5	3-20	1.5%	For control, apply 7.5 pints of this product per acre. For partial control, apply 4.5 pints per acre. Treat when Bermuda grass is actively growing and seedheads are present. Retreatment may be necessary to maintain control.
Bermuda grass, water (knotgrass)	1.5- 2.25	5-10	1.5%	Apply 2.25 pints of this product in 5 to 10 gallons of water per acre. Apply when water Bermuda grass is 12 to 18 inches in length. Allow 7 or more days before tilling, flushing or flooding the field.  Fall applications only: Apply 1.5 pints of this product in 5 to 10 gallons of water per acre. Fallow fields should be tilled prior to application. Apply prior to frost on water Bermuda grass that is 12 to 18 inches in length.  This product is not registered in California for use on water Bermuda grass.
Bindweed, field	.75 – 7.5	3-20	1.5%	Do not treat when weeds are under drought stress as good soil moisture is necessary for active growth.  For control, apply 6 to 7.5 pints of this product per acre west of the Mississippi River and 4.5 to 6 pints east of the Mississippi. Apply when the weeds are at or beyond full bloom. For best results, apply in late summer or fall. Fall treatments must be applied before a killing frost.  Also for control, apply 3 pints of this product plus 0.5 pound a.i. of Banvel in 10 to 20 gallons of water per acre. Do not apply by air.  For suppression on irrigated agricultural land, apply 1.5 to 3 pints of this product plus 1 pound a.i. of 2,4-D in 10 to 20 gallons of water per acre with ground equipment only. Applications should be made following harvest or in fall fallow ground when the bindweed is actively

				<p>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.</p> <p>For suppression, apply 12 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.</p> <p><b>In California only</b>, apply 1.5 to 7.5 pints 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 1.5 pints of this product in 3 to 10 gallons of water per acre.</p> <p>Apply to bindweed that has reached a length of 12 inches or greater. Allow maximum weed emergence and runner growth. Allow 3 or more days after application before tillage.</p>
Bluegrass, Kentucky	1.5-3	3-40	1.5%	Apply 3 pints 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 renovations, apply 1.5 to 2.25 pints 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	4.5-7.5	3-40	1.5%	Apply 6 to 7.5 pints of this product per acre west of the Mississippi River and 4.5 to 6 pints 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.
Brackenfern	4.5-6	3-40	.75-1.5%	Apply to fully expanded fronds which are at least 18 inches long.
Bromegrass, smooth	1.5-3	3-40	1.5%	Apply 3 pints 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 1.5 to 2.25 pints 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-	--	3-20	1.5%	For control, apply 3 pints of this product

leaf				plus 1 pint of Banvel per acre. For partial control, apply 1.5 pints 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.
Canarygrass, reed	3-4.5	3-40	1.5%	For best results, apply when most plants have reached the boot-to-head stage of growth.
Cattail	4.5-7.5	3-40	1.5%	Apply when most plants have reached the early head stage.
Clover; red, white	4.5-7.5	3-20	1.5%	Apply when most plants have reached the early bud stage.
Cogongrass	4.5-7.5	10-40	1.5%	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.
Dallisgrass	4.5-7.5	3-20	1.5%	Apply when most plants have reached the early head stage.
Dandelion	4.5-7.5	3-40	1.5%	Apply when most plants have reached the early bud stage of growth.  Also for control, apply 12 fluid ounces of this product plus 0.5 pound a.i. 2,4-D in 3 to 10 gallons of water per acre.
Dock, curly	4.5-7.5	3-40	1.5%	Apply when most plants have reached the early bud stage of growth.  Also for control, apply 12 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	6	3-40	1.5%	Apply when most plants have reached the late bud to flower stage of growth. Following crop harvest or mowing, allow weeds to regrow to a mature stage prior to treatment. For best results, apply in late summer or fall.  For suppression, apply 12 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. Delay applications until maximum emergence of dogbane has occurred.
Fescue (except tall)	4.5-7.5	3-20	1.5%	Apply when most plants have reached the early head stage.
Fescue, tall	1.5-4.5	3-40	1.5%	Apply 4.5 pints of this product per acre when most plants have reached boot-to-early seedhead stage of development.  Fall applications only: Apply 1.5 pints 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 12 fluid ounces per acre of this product will improve long-term control and control seedlings germinating after fall treatments or the following spring.
Guineagrass	4.5	3-40	.75%	Apply when most plants have reached at least the 7-leaf stage of growth. Ensure thorough coverage when using hand-held equipment.
Horsenettle	4.5-7.5	3-20	1.5%	Apply when most plants have reached the early bud stage.
Horseradish	6	3-40	1.5%	Apply when most plants have reached the late bud to flower stage of growth. For best results, apply in late summer or fall.
Iceplant	--	--	1.5%	Iceplant should be at or beyond the early bud stage of growth. Thorough coverage is necessary for best control.
Jerusalem artichoke	4.5-7.5	3-20	1.5%	Apply when most plants are in the early bud stage.
Johnsongrass	.75-4.5	3-40	.75%	<p>In annual cropping systems apply 1.5 to 3 pints of this product per acre. Apply 1.5 pints of this product in 3 to 10 gallons of water per acre. Use 3 pints 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 3 to 4.5 pints of this product in 10 to 40 gallons of water per acre.</p> <p>For best results, apply when most plants have reached the boot-to-head stage of growth or in the fall prior to frost. Allow 7 or more days after application before tillage. Do not tank-mix residual herbicides when using 1 quart per acre rate.</p> <p>For burndown of Johnsongrass, apply 12 fluid ounces of this product in 3 to 10 gallons of water per acre before the plants reach a height of 12 inches. For this use, allow at least 3 days after treatment before tillage.</p> <p>Spot treatment (partial control or suppression)—Apply a ¾ percent solution of this product when Johnsongrass is 12 to 18 inches in height. Coverage should be uniform and complete.</p>
Kikuyugrass	3-4.5	3-40	1.5%	Spray when most kikuyugrass is at least 8 inches in height (3 or 4 leaf stage of growth). Allow 3 or more days after application before tillage.
Knapweed	6	3-40	1.5%	Apply when most plants have reached the late bud to flower stage of growth. For best results, apply in later summer or fall.
Lantana	--	--	.75%-1.0%	Apply at or beyond the bloom stage of growth. Use the higher application rate for plants that have reached the woody stage

				of growth.
Lespedeza	4.5-7.5	3-20	1.5%	Apply when most plants have reached the early bud stage.
Milkweed, common	4.5	3-40	1.5%	Apply when most plants have reached the late bud to flower stage of growth.
Muhly, wirestem	1.5-3	3-40	1.5%	Use 1.5 pints of this product in 3 to 10 gallons of water per acre. Use 3 pints 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 prior to spring applications. Allow 3 or more days after application before tillage.
Mullein, common	4.5-7.5	3-20	1.5%	Apply when most plants are in the early bud stage.
Napiergrass	4.5-7.5	3-20	1.5%	Apply when most plants are in the early head stage.
Nightshade, silverleaf	3	3-10	1.5%	Applications should be made when at least 60 percent of the plants have berries. Fall treatments must be applied before a killing frost.
Nutsedge, purple, yellow	.75-4.5	3-40	.75-1.5%	<p>Apply 4.5 pints of this product per acre or apply a <math>\frac{3}{4}</math> to <math>1\frac{1}{2}</math> percent solution for control of nutsedge plants and immature nutlets attached to treated plants. Treat when plants are in flower or when new nutlets can be found at rhizome tips. Nutlets which have not germinated will not be controlled and may germinate following treatment. Repeat treatments will be required for long-term control of ungerminated tubers.</p> <p>Sequential applications: 1.5 to 3 pints 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.</p> <p>For partial control of existing plants, apply 12 fluid ounces to 3 pints 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.</p>
Orchardgrass	1.5-3	3-40	1.5%	Apply 3 pints 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 1.5 to

				<p>2.25 pints 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.</p> <p>Orchardgrass sods going to no-till corn: Apply 1.5 to 2.25 pints 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.</p>
Pampasgrass	--	--	1.5%	Pampasgrass should be at or beyond the boot stage of growth. Thorough coverage is necessary for best control.
Paragrass	4.5-7.5	3-20	1.5%	Apply when most plants are in the early head stage.
Phragmites	4.5-7.5	10-40	.75-1.5%	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	--	--	.75-1.5%	Apply as a spray-to-wet treatment. Optimum results are obtained when plants are treated at the bud to full-bloom stage of growth.
Pokeweed, common	1.5	3-40	1.5%	Apply to actively growing plants up to 24 inches tall.
Quackgrass	1.5-4.5	3-40	1.5%	<p>In annual cropping systems, or in pastures and sods followed by deep tillage: Apply 1.5 pints of this product in 3 to 10 gallons of water per acre. For 10 to 40 gallons of water per acre, apply 3 pints of this product. Do not tank mix with residual herbicides when using the 1.5 pint rate. Spray when quackgrass is 6 to 8 inches in height. Do not till between harvest and fall applications or in fall or spring prior to spring application. Allow 3 or more days after application before tillage. In pastures or sods, use a moldboard plow for best results.</p> <p>In pastures, sods or noncrop areas where deep tillage does not follow application: Apply 3 to 4.5 pints of this product in 10 to 40 gallons of water per acre when the quackgrass is greater than 8 inches tall.</p>
Redvine	1.25-3	5-10	1.5%	For suppression, apply 18 fluid ounces of this product per acre at each of two applications 7 to 14 days apart or a single

				application of 3 pints per acre. Apply recommended rates in 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	--	--	1.5%	Best results are obtained when applications are made in late summer to fall.
Ryegrass, perennial	1.5-4.5	3-40	.75%	In annual cropping systems apply 1.5 to 3 pints of this product per acre. Apply 1.5 pints of this product in 3 to 10 gallons of water per acre. Use 3 pints 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 3 to 4.5 pints 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 the 1.5 pint per acre rate.
Smartweed, swamp	4.5-7.5	3-40	1.5%	Apply when most plants have reached the early bud stage of growth.  Also for control, apply 12 fluid ounces of this product plus 0.5 pound a.i. of 2,4-D in 3 to 10 gallons of water per acre in the late summer or fall.
Sowthistle, perennial	3-4.5	3-40	1.5%	Apply when most plants are at or beyond the bud stage of growth. After harvest, mowing or tillage in the late summer or fall, allow at least 4 weeks for initiation of active growth and rosette development prior to the application of this product. Fall treatments must be applied before a killing frost. Allow 3 or more days after application before tillage.
Spurge, leafy	--	3-10	1.5%	For suppression, apply 12 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	3	10-40	1.5%	Best results are obtained when applications are made during the rosette, bolting and early flower stages.
Sweet potato, wild	--	--	1.5%	Partial control. Apply to plants that are at or beyond the bloom stage of growth. Repeat applications may be required.
Thistle, artichoke	--	--	1.5%	Partial control. Apply to plants that are at or beyond the bloom stage of growth. Repeat applications may be required.
Thistle, Canada	3-4.5	3-40	1.5%	Apply when most plants are at or beyond the bud stage of growth. After harvest, mowing or tillage in the late summer or fall,

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				<p>allow at least 4 weeks for initiation of active growth and rosette development prior to the application of this product. Fall treatments must be applied before a killing frost. Allow 3 or more days after application before tillage.</p> <p>For suppression, apply 1.5 pints of this product, or 12 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 after harvest, mowing or tillage. Allow rosette regrowth to a minimum of 6 inches in diameter before treating. Applications can be made as long as leaves are still green and plants are actively growing at the time of application. Allow 3 or more days after application before tillage.</p>
Timothy	3-4.5	3-40	1.5%	For best results, apply when most plants have reached the boot-to-head stage of growth.
Torpedograss	6-7.5	3-40	1.5%	For partial control. Apply when most plants are at or beyond the seedhead stage of growth. Repeat applications will be required to maintain control. Fall treatments must be applied before the frost.
Trumpetcreeper	3	5-10	1.5%	Partial control. Apply in late September or October to plants that are at least 18 inches tall and have been growing 45 to 60 days since the last tillage operation. Make applications at least 1 week before a killing frost.
Vaseygrass	4.5-7.5	3-20	1.5%	Apply when most plants are in the early head stage.
Velvetgrass	4.5-7.5	3-20	1.5%	Apply when most plant are in the early head stage.
Wheatgrass, western	3-4.5	3-40	1.5%	For best result, apply when most plants have reached the boot-to-head stage of growth,

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

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

In arid areas, best results are obtained when application 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 undesirable deciduous species are acceptable provided no major leaf drop has occurred. Reduced performance may result if fall treatments are made following a frost.

Weed Species	Rate	Water	Hand-Held	Comments
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	(PT/A)	Volume	% Solution	
Alder	4.5-6	3-40	.75-1.5%	For control
Ash	3-7.5	3-40	.75-1.5%	Partial control
Aspen, quaking	3-4.5	3-40	.75-1.5%	For control
Bearmat (bearclover)	3-7.5	3-40	.75-1.5%	Partial control
Beech	3-7.5	3-40	.75-1.5%	Partial control
Birch	3	3-40	.75%	For control
Blackberry	4.5-6	10-40	.75-1.5%	For control. Make applications after plants have reached full leaf maturity. Best results are obtained when applications are made in later 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 ¾ percent solution of this product. For control of blackberries after leaf drop and until killing frost or as long as stems are green, apply 4.5 to 6 pints of this product in 10 to 40 gallons of water per acre.
Blackgum	3-7.5	3-40	.75-1.5%	For control
Bracken	3-7.5	3-40	.75-1.5%	For control
Broom; French, Scotch	--	--	1.5%	For control
Buckwheat, California	--	--	.75-1.5%	For partial control. Thorough coverage of foliage is necessary for best results.
Cascara	3-7.5	3-40	.75-1.5%	Partial control
Catsclaw	--	--	.75-1.5%	Partial control
Ceanothus	3-7.5	3-40	.75-1.5%	Partial control
Chamise	--	--	.75%	For control. Thorough coverage of foliage is necessary for best results.
Cherry; bitter, black, pin	3-4.5	3-40	.75-1.5%	For control
Coyote brush	--	--	1.5%	For control. Apply when at least 50 percent of the new leaves are fully developed.
Dogwood	3-7.5	3-40	.75-1.5%	Partial control
Elderberry	3	3-40	.75%	For control
Elm	3-7.5	3-40	.75-1.5%	Partial control
Eucalyptus	--	--	1.5%	For control of eucalyptus resprouts, apply when resprouts are 6 to 12 feet tall. Ensure complete coverage. Avoid application to drought-stressed plants.
Florida holly (Brazilian peppertree)	3-7.5	3-40	.75-1.5%	Partial control
Gorse	3-7.5	3-40	.75-1.5%	Partial control
Hasardia	--	--	.75-1.5%	Partial control. Thorough coverage of foliage is necessary for best results.
Hawthorn	3-4.5	3-40	.75-1.5%	For control
Hazel	3	3-40	.75%	For control
Hickory	3-7.5	3-40	.75-1.5%	Partial control
Honeysuckle	3-6	3-40	.75-1.5%	For control
Hornbeam, American	3-7.5	3-40	.75-1.5%	Partial control
Kudzu	6	3-40	1.5%	For control. Repeat applications may be required to maintain control.
Locust, black	3-6	3-40	.75-1.5%	Partial control
Madrone resprouts	--	--	1.5%	Partial control. Apply to resprouts that

				are 3 to 6 feet tall. Best results are obtained with spring/early summer treatments.
Manzanita	3-7.5	3-40	.75-1.5%	Partial control
Maple, red	3-6	3-40	.75-1.5%	For control. Thoroughly apply a 0.75 to 1.5 percent solution when at least 50 percent of the new leaves are fully developed. For partially control, apply 3 to 6 pints of this product per acre.
Maple, sugar	--	--	.75-1.5%	For control. Apply when at least 50 percent of the new leaves are fully developed.
Monkey flower	--	--	.75-1.5%	Partial control. Thorough coverage of foliage is necessary for best results.
Oak; black, white	3-6	3-40	.75-1.5%	Partial control
Oak, post	4.5-6	3-40	.75-1.5%	For control
Oak; northern, pin	--	--	.75-1.5%	For control. Apply when at least 50 percent of the new leaves are fully developed.
Oak; southern red	3-4.5	3-40	.75-1.5%	For control
Persimmon	3-7.5	3-40	.75-1.5%	Partial control
Pine	3-7.5	3-40	.75-1.5%	For control
Poison ivy/poison oak	6-7.5	3-40	1.5%	For control. Repeat applications may be required to maintain control. Fall treatments must be applied before leaves lose green color.
Poplar, yellow	3-7.5	3-40	.75-1.5%	Partial control
Redbud, eastern	3-7.5	3-40	.75-1.5%	For control
Rose, multiflora	3	3-40	.75%	For control. Treatments should be made prior to leaf deterioration by leaf-eating insects.
Russian olive	3-7.5	3-40	.75-1.5%	Partial control
Sage, black	--	--	.75%	For control. Thorough coverage of foliage is necessary for best results.
Sage, white	3-7.5	3-40	.75-1.5%	Partial control
Sage brush, California	--	--	.75%	For control. Thorough coverage of foliage is necessary for best results.
Salmonberry	3	3-40	.75%	For control
Salt-cedar	3-7.5	3-40	.75-1.5%	For control
Sassafras	3-7.5	3-40	.75-1.5%	Partial control
Sourwood	3-7.5	3-40	.75-1.5%	Partial control
Sumac; poison, smooth, winged	3-6	3-40	.75-1.5%	Partial control
Sweetgum	3-4.5	3-40	.75-1.5%	For control
Swordfern	3-7.5	3-40	.75-1.5%	Partial control
Tallowtree, Chinese	--	--	.75%	For control. Thorough coverage of foliage is necessary for best results.
Tanoak resprouts	--	--	1.5%	For partial control. Apply to resprouts that are less than 3 to 6 feet tall. Best results are obtained with fall applications.
Thimbleberry	3	3-40	.75%	For control
Tobacco, tree	--	--	.75-1.5%	Partial control
Trumpetcreeper	3-4.5	3-40	.75-1.5%	For control
Vine maple	3-7.5	3-40	.75-1.5%	Partial control
Virginia creeper	3-7.5	3-40	.75-1.5%	For control
Waxmyrtle, southern	3-7.5	3-40	.75-1.5%	Partial control
Willow	4.5	3-40	.75%	For control

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The label instructions for 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 the 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 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 use therein described when used in accordance with the Directions for Use set forth in the label booklet, 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.

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

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4/2/03 – update first aid per PRN