## **Cornerstone® 5 Plus Herbicide**

GROUP	9	HERBICIDE		
GINOUP	3	TIERBIGIDE		
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.				
Read the entire label before using this product. Use only according to label instructions. Read "CONDITIONS OF SALE AND WARRANTY" before buying or using. If terms are not acceptable, return product at once unopened.				
ACTIVE INGREDIENT: *Glyphosate, N-(phosphonomethyl) glycine, in the form of its isopropylamine salt				

\* Contains 660 grams per liter or 5.5 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

FIRST AID			
• Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing.			
Call a poison control center or doctor for treatment advice.			
HOT LINE NUMBER			
Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-877-424-7452 for emergency medical treatment information.			

## See booklet for additional Precautionary Statements, complete Directions for Use, Warranty Disclaimer and Limitation of Liability

EPA Reg. No. 1381-241

Distributed By: Winfield Solutions, LLC P.O. Box 64589 St. Paul, MN 55164-0589 EPA Est. No.

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## PRECAUTIONARY STATEMENTS Hazards to Humans and Domestic

**CAUTION:** Causes moderate eye irritation. Do not get in eyes, on skin, or on clothing. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash clothing before re-use.

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

## PERSONAL PROTECTIVE EQUIPMENT: (PPE)

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

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

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

## User Safety Recommendations:

Users should:

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

#### **ENVIRONMENTAL HAZARDS**

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

## 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.

Read the entire label before using this product. Use only according to label instructions.

Read "WARRANTY DISCLAIMER" and "LIMITATION OF LIABILITY" before buying or using. If terms are not acceptable, return product at once unopened.

## 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, is: coveralls, chemical resistant gloves such as butyl rubber, natural rubber, neoprene rubber, or nitrile rubber  $\geq$  14 mils, and 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.

## STORAGE AND DISPOSAL

Do not contaminate water, foodstuffs, feed or seed by storage or disposal.

**Pesticide Storage:** Store above 10°F (-12°C) to keep product from crystallizing. Crystals will settle to the bottom. If allowed to crystallize, place in a warm room 68°F (20°C) for several days to redissolve and roll or shake container or recirculate in mini-bulk or bulk container to mix well before using.

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

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

**Container Handling:** Use label language appropriate for container size and type.

**Nonrefillable containers.** Do not reuse or refill this container. Clean container promptly after emptying.

**Nonrefillable container equal to or less than 5 gallons.** Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. 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.

**Nonrefillable container greater than 5 gallons.** Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container ¼ full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. 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.

**Refillable container.** Refill this container with pesticide only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times. 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 CHEMICAL EMERGENCY: Spill, leak, fire, exposure, or accident, call CHEMTREC 1-800-424-9300

## **PRODUCT INFORMATION**

**Product Description:** This product is a postemergent, systemic herbicide with no soil residue 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.

This product can be mixed with additives containing surfactant, buffering agents or pH adjusting agents. It can be applied through most standard industrial or field-type sprayers after dilution and thorough mixing with water or other carriers according to label instructions. Ammonium Sulfate can be used. See the "MIXING" section of this label for instructions.

**Time to Visible 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 visible 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 more information on controlling specific weeds.

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

**Mechanism of Action:** The active ingredient in this product inhibits an enzyme, found only in plants and microorganisms, 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.

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

**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 (6 pounds of glyphosate acid) of this product per acre per year. For applications in noncrop sites or in tree, vine, or shrub crops, the combined total of all treatments must not exceed 8 quarts (8 pounds of glyphosate acid) 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.

**For Glyphosate Weed Resistance Management:** Glyphosate, the active ingredient in this product, is a Group 9 herbicide. Target site resistance to Group 9 herbicides is rare. Although rare in occurrence, any weed population may contain plants naturally resistant to Group 9 herbicides. Weed species resistant to Group 9 herbicides may be effectively managed utilizing another herbicide from a different Group or using other cultural practices.

Weed resistance management recommendations for Group 9 herbicides are:

- Ensure optimum weed control by making applications at the right time (correct weed size) and utilizing the specified label rate for the most difficult to control weed in your field.
- Base decisions on local needs and use the tool(s) necessary to obtain optimum weed control and minimize weed escapes.
- Avoid tank mixtures that reduce this product's efficacy (through antagonism) or which encourage the use of rates of this product below the labeled rate.
- Scout treated weed populations for escapes 2 to 4 weeks after application.
- Report any incidence of repeated nonperformance of this product on a particular weed to the local retailer or county extension agent.

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

#### MIXING

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:

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

## Tank Mixing Procedure:

This product does not provide residual weed control. For subsequent residual weed control, follow a label-approved herbicide program. Always predetermine the compatibility of labeled tank mixtures of this product with water carrier by mixing small proportional quantities in advance.

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

To the extent consistent with applicable law, 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

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 ammonium sulfate is used, add it slowly through the screen into the tank. Continue agitation. Ensure that dry ammonium sulfate is completely dissolved in the spray tank before adding other products.
- 4. 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.

- 5. 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.
- 6. 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.
- 7. Continue filling the spray tank with water and add the required amount of this product near the end of the filling process.
- 8. If a surfactant is used, add it to the spray tank before completing the filling process.
- 9. Add individual formulations to the spray tank as follows: wettable powder, flowable, emulsifiable concentrate, drift control additive, water soluble liquid.

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

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

#### **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:

Desired Volume	Amount of Cornerstone® 5 Plus					
Volume	0.5%	1%	1.5%	2%	5%	10%
1 Gallon	0.6 oz.	1.3 oz.	2 oz.	2.6 oz.	6.5 oz.	13 oz.
25 Gallon	1 pt.	1 qt.	1.5 qt.	2 qt.	5 qt.	10 qt.
100 Gallon	2 qt.	1 gal.	1.5 gal.	2 gal.	5 gal.	10 gal.
I		2 tables	spoons = 1 fluid	d ounce	<u> </u>	1

#### Sprav Solution

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

#### Surfactants

Surfactants or wetting agents that are labeled for use with herbicides can be added to the spray solution. Do not reduce rates of this herbicide when adding surfactants. Read and follow instructions on the additives' label. When an adjuvant is to be used with this product, Winfield Solutions, LLC recommends the use of a Council of Producers and Distributors of Agrotechnology certified adjuvant.

#### 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 under hard water conditions, drought conditions or 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 dry 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 specified in this label. Lower rates will result in reduced performance.

#### **Colorants or Dyes**

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

#### **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 the cautionary statements and all other information appearing on the additive label. The use of drift control additives can affect spray coverage which may result in reduced performance.

## APPLICATION EQUIPMENT AND TECHNIQUES

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

**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.

## AERIAL EQUIPMENT

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

Use the specified 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 fl. oz. per acre. Refer to the individual use area sections of this label for specified volumes and application rates.

For aerial application in California and Fresno County California, refer to the "FOR AERIAL APPLICATION IN CALIFORNIA ONLY" and "FOR AERIAL APPLICATION IN FRESNO COUNTY CALIFORNIA ONLY" sections of this label for specific instructions, restrictions and requirements.

For aerial application in Arkansas, refer to the "ARKANSAS ONLY" section of this label for specific instructions, restrictions and requirements.

Avoid direct application to any body of water.

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

Thoroughly wash aircraft, especially landing gear, after each day of spraying to remove residues of this product accumulated during spraying and from spills. PROLONGED EXPOSURE OF THIS PRODUCT

TO UNCOATED STEEL SURFACES MAY RESULT IN CORROSION AND POSSIBLE FAILURE OF THE PART. LANDING GEAR IS MOST SUSCEPTIBLE. The maintenance of an organic coating (paint), which meets aerospace specification MIL-C-38413, may prevent corrosion.

## **AERIAL SPRAY DRIFT MANAGEMENT**

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

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

The following drift management requirements must be followed to avoid off-target drift movement from aerial applications to agricultural field crops. These requirements do not apply to forestry applications, public health uses or to applications using dry formulations.

- 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.

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

## Importance of Droplet Size

## **Aerial Drift Reduction Advisory**

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").

## 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** Applications must 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 to 10 mph. However, many factors, including droplet size and equipment type determine drift potential at any given speed. Application must be avoided below 2 mph due to variable wind direction and high inversion potential. **Note:** Local terrain can influence wind patterns. Every applicator should be familiar with local wind patterns and how they affect drift.

## Temperature and Humidity

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

### Temperature Inversion

Applications must 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 must 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).

## FOR AERIAL APPLICATION IN CALIFORNIA ONLY

Do not apply this product using aerial application equipment in residential areas.

When tank mixing this product with 2,4-D for aerial applications, only 2,4-D amine formulations may be used. This tank mixture may be used for fallow and reduced tillage systems and alfalfa and pasture renovation applications only.

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

AVOID DRIFT – DO NOT APPLY WHEN WINDS ARE GUSTY OR UNDER ANY OTHER CONDITION WHICH FAVORS DRIFT. DRIFT MAY CAUSE DAMAGE TO ANY VEGETATION CONTACTED TO WHICH TREATMENT IS NOT INTENDED. TO PREVENT INJURY TO ADJACENT DESIRABLE VEGETATION, APPROPRIATE BUFFER ZONES MUST BE MAINTAINED.

Use the following guidelines when aerial applications are made near crops or desirable perennial vegetation after bud break and before total leaf drop, and/or near other desirable vegetation or annual crops.

- 1. Do not apply within 100 feet of all desirable vegetation or crop(s).
- 2. If wind up to 5 miles per hour is blowing toward desirable vegetation or crop(s), do not apply within 500 feet of the desirable vegetation or crop(s).
- 3. Winds blowing from 5 to 10 miles per hour toward desirable vegetation may require buffer zones in excess of 500 feet.
- 4. Do not apply when winds are in excess of 10 miles per hour or when inversion conditions exist.

## FOR AERIAL APPLICATION IN FRESNO COUNTY, CALIFORNIA ONLY From February 15 through March 31 Only

Always read and follow the label direction and precautionary statements for all products used in the aerial application.

#### **Applicable Area**

The area contained inside the following boundaries within Fresno County, California. North: Fresno County line South: Fresno County line East: State Highway 99 West: Fresno County line

Observe the following directions to minimize off-site movement during aerial application of this product. Minimization of off-site movement is the responsibility of the grower, Pest Control Advisor and aerial applicator.

#### Written Recommendations

A written recommendation MUST be submitted by or on behalf of the applicator to the Fresno county Agricultural Commissioner 24 hours prior to the application. This written recommendation MUST state the proximity of surrounding crops, and that conditions of each manufacturer's product label and this label have been satisfied.

#### Aerial Applicator Training and Equipment

Aerial application of this product is limited to pilots who have successfully completed a Fresno County Agricultural Commissioner and California Department of Pesticide Regulation approved training program for aerial application of herbicides. All aircraft must be inspected, critiqued in flight and certified at a Fresno County Agricultural Commissioner approved fly-in. Test and calibrate spray equipment at intervals sufficient to ensure that proper rates of herbicides and adjuvants are being applied during commercial use. Applicator must document such calibrations and testing. Demonstration of performance at Fresno County Agricultural Commissioner approved fly-ins constitutes such documentation, or other written records showing calculations and measurements of flight and spray parameters acceptable to the Fresno County Agricultural Commissioner.

**Applications at Night** – Do not apply this product by air earlier than 30 minutes prior to sunrise and/or later than 30 minutes after sunset without prior permission from the Fresno County Agricultural Commissioner.

**Note**: For aerial application from April 1 through February 14, refer to the "FOR AERIAL APPLICATION IN CALIFORNIA ONLY" section of this label.

#### ARKANSAS ONLY

AVOID DRIFT. DO NOT APPLY INTO STILL AIR WHERE THERE IS A TEMPERATURE INVERSION LAYER LOW ENOUGH FOR FINE SPRAY PARTICLES TO BECOME SUSPENDED AND MOVE OUTSIDE THE TARGET AREA WHEN THE INVERSION LAYER MOVES. DO NOT APPLY WHEN WINDS ARE GUSTY OR UNDER ANY OTHER CONDITION THAT FAVORS DRIFT. DRIFT IS LIKELY TO CAUSE DAMAGE TO ANY VEGETATION CONTACTED. TO PREVENT INJURY TO ADJACENT DESIRABLE VEGETATION, APPROPRIATE BUFFER ZONES MUST BE MAINTAINED.

Use the specified rate of this product in 3 to 15 gallons of water per acre. Use sufficient carrier volume and appropriate equipment set-up to form droplets large enough to avoid drift potential. Coarse droplets in the 300 to 500 (VMD) micron range are required.

Applications should typically be made with the nozzle release point at 8 to 15 feet above the top of the target plants unless a greater height is required for aircraft safety. The distance of the outermost nozzles on the boom must not exceed 75% of the length of the wingspan or rotor. In many cases reducing this

distance to 65% of the length of the wingspan or rotor will improve drift control without affecting the swath width.

Nozzles must always discharge backward parallel with the airstream and never discharge downwards more than 45 degrees on fixed wing aircraft or forward of the prevailing airflow on rotary winged aircraft. Avoid the use of nozzles with wide-angle discharge.

Do not apply this product when wind speeds are in excess of 10 miles per hour. Do not apply when there is a low-level inversion where fine spray particles could be suspended in still air and move outside the target area when the inversion layer moves. These conditions may occur when wind speeds are less than 2 mph.

Use the following guidelines when applications are made near crops or other desirable vegetation:

- 1. Do not apply within 100 feet of any desirable vegetation or crops.
- 2. If wind up to 5 miles per hour is blowing toward desirable vegetation or crops, do not apply within 500 feet upwind of the desirable vegetation or crops.
- 3. Winds blowing from 5 to 10 miles per hour toward desirable vegetation or crops will likely require buffer zones in excess of 500 feet.

## ARKANSAS, LOUISIANA, MISSISSIPPI, MISSOURI, AND TENNESSEE ONLY

This product controls annual and perennial weeds listed on this label prior to planting or emergence of corn, cotton, rice, sorghum and soybeans; prior to the harvest of cotton and soybeans; and following the harvest of any crop in the fall via aerial applications in these locations.

Aerial applications of this product may be made in fallow systems and conventional, reduced and zero tillage systems. For applications via aerial equipment, use the specified rates of this product in 3 to 10 gallons of water per acre. Do not exceed a rate of 4.5 pts. per acre.

The likelihood of injury occurring from the use of this product is greatest when winds are gusty or in excess of 5 miles per hour or when other conditions, including lesser velocities, will allow spray drift to occur.

## **GROUND BROADCAST EQUIPMENT**

Use the specified rates of this product in 3 to 40 gallons of water per acre as a broadcast spray unless otherwise specified. As density of weeds increases, spray volume should be increased within the specified range to ensure complete coverage. Carefully select proper nozzles to avoid spraying a fine mist. For best results with ground application equipment, use flat fan nozzles. Check for even distribution of spray droplets.

## HAND-HELD AND HIGH-VOLUME EQUIPMENT

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

For specified rates and timing, refer to the "Annual Weeds – Hand-Held or High-Volume Equipment" section of this product label.

## 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.

In cropping systems, hooded sprayers, shielded sprayers, and wipers may be used in row middles (in between rows of crop plants) where any dripping or leaking will not contact crop foliage. Such equipment must be capable of preventing all crop contact with herbicide solutions and operated without leakage of spray mists or dripping onto crop. Wipers over-the-top of crops may be used only when specifically specified in this product's labeling.

## AVOID CONTACT OF HERBICIDE WITH DESIRABLE VEGETATION.

Contact of the herbicide solution with 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.

#### **Recirculating Spray System**

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.

#### **Shielded and Hooded Applicators**

When applied under the conditions described in the following paragraphs for shielded and hooded applications, this product at specified rates will control those weeds listed in the "ANNUAL WEEDS RATE TABLE" and "PERENNIAL WEEDS RATE TABLE" sections of this label. A hooded sprayer is a type of shielded applicator where the spray pattern is fully enclosed including top, sides, front and back, thereby shielding the crop from the spray solution. Keep shields on these sprayers adjusted to protect desirable vegetation. When applying to crops 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. EXTREME CARE MUST BE EXERCISED TO AVOID CONTACT OF HERBICIDE WITH DESIRABLE VEGETATION.

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. Avoid operation on rough or sloping ground where the spray hoods might be raised off the ground.

Use hoods designed to minimize excessive dripping or run-off down the insides of the hoods. A single, low pressure / low drift flat-fan nozzle with an 80 to 95 degree spray angle positioned at the top center of the hood is recommended. Spray volume should be 20 to 30 gallons per acre.

These procedures will reduce the potential for crop injury:

- The spray hoods must be operated on the ground or skimming across the ground.
- 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 to avoid bouncing of the spray hoods.
- Maximum wind speed: 10 mph.
- Use low-drift nozzles that provide uniform coverage within the treated area.

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.

#### Wiper Applicators

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 with weeds. Keep wiping surfaces clean. Be aware that, on sloping ground, the herbicide solution may migrate, causing dripping on the lower end and drying of the wicks on the upper end of a wiper applicator.

Do not use wiper equipment when weeds are wet.

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

Do not add surfactant to the herbicide solution.

**For rope or sponge wick applicators:** Mix 3 qts. of this product in 2 gallons of water to prepare a 33% solution. Apply this solution to weeds listed in this section.

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

When applied as specified, this product CONTROLS the following weeds:

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

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

Beggarweed, Florida	
Bermudagrass	
Dogbane, hemp	
Dogfennel	
Guineagrass	
Johnsongrass	
Milkweed	
Nightshade, silverleaf	
Pigweed, redroot	

Ragweed, common Ragweed, giant Smutgrass Sunflower Thistle, Canada Thistle, musk Vaseygrass Velvetleaf

\* Except volunteer Roundup Ready Corn.

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

For the control of annual weeds with hand-held CDA units, apply a 20% solution of this product at a flow rate of 2 fluid ounces per minute and a walking speed of 1.5 mph (1.5 pts. 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 pts. 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.

## ANNUAL AND PERENNIAL CROPS (Alphabetical)

NOTE: THIS SECTION GIVES DIRECTIONS FOR USE OF THIS PRODUCT THAT APPLY TO ALL CROPS LISTED BELOW, GROUPED ALPHABETICALLY. SEE THE INDIVIDUAL CROP CATEGORIES FOR SPECIFIC INSTRUCTIONS, PREHARVEST INTERVALS, AND ADDITIONAL PRECAUTIONS AND RESTRICTIONS.

See the "ROUNDUP READY CROPS" section of this label for instructions for treating Roundup Ready crops.

**Types of applications:** Chemical fallow, preplant fallow beds, preplant, pre-emergence, at-planting, Selective equipment in row middles (hooded or shielded sprayers, or wiper applicators), and postharvest treatments.

See "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label for additional information.

## **Use Instructions:**

Apply this product during fallow intervals preceding planting, prior to planting or transplanting, at-planting, or pre-emergent to annual and perennial crops listed in this label, except where specifically limited. For any crop <u>not</u> listed in this label, applications must be made at least 30 days prior to planting. Unless otherwise specified, weed control applications may be made according to the rates listed in the annual, perennial and woody brush tables in this label. Repeat applications may be made up to a maximum of 6 quarts per acre per year.

Post-directed hooded sprayers and wiper equipment capable of preventing all crop contact with herbicide solutions may be used in mulched or unmulched row middles after crop establishment. Where specifically noted below, wipers may also be used above certain crops to control tall weeds. Refer to the "SELECTIVE EQUIPMENT" section of this label for essential precautions when using hooded sprayers or wipers to avoid crop injury caused by leakage of spray mists or dripping onto crops. Crop injury is possible with these applications and shall be the sole responsibility of the applicator.

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.

## PRECAUTIONS:

- Avoid contact of herbicide with foliage, green shoots or stems, bark, exposed roots (including those emerging from plastic mulch), or fruit of crops because severe injury or destruction may result.
- When making pre-emergence and at-planting applications, applications must be made before crop emergence to avoid severe crop injury. Broadcast applications made at emergence will result in injury or death to emerged seedlings.
- When applying this product prior to transplanting or direct-seeding crops into plastic mulch, care
  must be taken to remove residues of this product, which could cause crop injury, from the plastic
  prior to planting. Residues can be removed by a single 0.5 inch application of water, either by
  natural rainfall or via a sprinkler system.
- Apply before seed germination in coarse sandy soils to further minimize the risk of injury.

• In crops where spot treatment is allowed the crop receiving spray in the treated area will be killed. Take care to avoid drift or spray outside the target are for the same reason.

## **RESTRICTIONS:**

- Unless otherwise specified on this product's labeling, treatments with selective equipment including wipers and hooded sprayers must be made at least 14 days prior to harvest.
- Postharvest or fallow applications must be made at least 30 days prior to planting any nonlabeled crop.
- In crops where spot treatments are allowed, do not treat more than 10 percent of the total field to be harvested.
- For broadcast postemergent treatments, do not harvest or feed treated vegetation for 8 weeks following application, unless otherwise specified.

## Asparagus

**Types of applications:** Those listed in the "ANNUAL AND PERENNIAL CROPS" section of this label plus the following: Weed control, site preparation, spot treatment.

#### Weed Control, Site Preparation

<u>USE INSTRUCTIONS</u>: This product may be applied prior to planting or transplanting asparagus.

<u>RESTRICTION</u>: Do not apply within a week before the first asparagus spears emerge.

#### Spot Treatment

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

<u>RESTRICTIONS</u>: Do not treat more than 10 percent of the total field area to be harvested. Do not harvest within 5 days of treatment.

#### Postharvest

<u>USE INSTRUCTIONS:</u> 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. Apply delayed treatments as directed or shielded sprays in order to avoid contact of the spray with ferns, stems or spears.

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.

PRECAUTION: Direct contact of the spray with the asparagus may result in serious crop injury.

## Cereal and Grain Crops

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

**Types of applications:** Those listed in the "ANNUAL AND PERENNIAL CROPS" section of this label plus the following: Red rice control prior to planting rice, spot treatment (except rice), wiper applicators over-the-top (wheat and feed barley only), preharvest (wheat and feed barley only), for barnyardgrass control (*Echinochloa crus-galli*) in rice using renovation treatments in California only.

Do not treat rice fields or levees when field contains floodwater.

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

<u>USE INSTRUCTIONS</u>: This product may be applied before, during or after planting of cereal crops. Applications must be made prior to emergence of the crop.

## **Red Rice Control Prior to Planting Rice**

<u>USE INSTRUCTIONS</u>: Apply 1.25 pts. 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 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. Avoid spraying during low humidity conditions, as reduced control may result.

<u>RESTRICTIONS</u>: Do not treat rice fields or levees when the fields contain floodwater. Do not re-flood treated fields for 8 days following application.

#### Spot Treatment (except rice)

<u>USE INSTRUCTIONS</u>: This product may be applied as a spot treatment in cereal crops. Apply this product before heading in small grains.

<u>PRECAUTIONS</u>: 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.

<u>RESTRICTION</u>: Do not treat more than 10% of the total field area to be harvested.

#### Wiper Applications (wheat and feed barley only)

<u>USE INSTRUCTIONS</u>: Wiper applications may be used in wheat or feed barley. 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.

<u>RESTRICTIONS</u>: Allow at least 35 days between application and harvest. Do not use roller applicators.

## Preharvest (wheat and feed barley only)

<u>USE INSTRUCTIONS</u>: This product provides weed control when applied prior to the harvest of wheat and feed barley. For wheat, apply after the hard-dough stage of grain (30% or less grain moisture). For feed barley, apply after the hard-dough stage and when the grain contains 20 percent moisture or less. 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.

<u>RESTRICTIONS</u>: Do not apply more than 1.5 pts. of this product per acre. Allow 7 days between application and harvest or grazing. Do not apply to wheat or barley grown for seed, as a reduction in germination or vigor may occur.

#### Postharvest

<u>USE INSTRUCTIONS</u>: 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.

<u>RESTRICTIONS</u>: For any crop not listed on this label, applications must be made at least 30 days prior to planting the next crop. Allow a minimum of 7 days between treatment and harvest or feeding of treated vegetation.

#### South Dakota Only For nonselective control of listed annual weeds in small grain cropping systems

<u>USE INSTRUCTIONS</u>: For ground applications, use 3 to 5 gallons of water per acre. For aerial applications, use 2 to 3 gallons of water per acre.

The likelihood of injury occurring from the use of this product is greatest when winds are gusty or in excess of 5 miles per hour, or when other conditions, including lesser wind velocities, will allow spray drift to occur. Adjust boom height on ground equipment to prevent streaked, overlapped, or uneven applications. Avoid spraying when weeds are subject to moisture stress, when dust is on foliage, or when straw canopy covers the weeds.

## California Only

## Barnyardgrass control (Echinochloa crus-galli) in rice using renovation treatments

<u>USE INSTRUCTIONS:</u> This product may be applied as a renovation treatment in rice crops to control barnyardgrass infestations using ground broadcast spray or hand-held equipment. Renovation is defined as herbicide treatment that will produce crop and weed destruction in an entire field or contiguous area treated within a field. Follow the application methods and specified treatment rates in this label.

<u>PRECAUTIONS</u>: 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.

<u>RESTRICTIONS</u>: Do not use the rice straw and stubble from the treated area, including a 25-foot buffer zone on all sides, for grazing, animal bedding or any feed purposes. No aerial applications are permitted for rice renovation.

#### Corn

Types of corn: Field corn, seed corn, sweet corn and popcorn.

**Types of applications:** Those listed in the "ANNUAL AND PERENNIAL CROPS" section of this label plus the following: Spot treatment, preharvest.

For Roundup Ready corn, see the "ROUNDUP READY CROPS" section of this label.

## Preplant, Pre-emergence and At-planting

<u>USE INSTRUCTIONS</u>: This product may be applied alone or in a tank mixture before, during or after planting corn. Applications must be made prior to emergence of the crop.

Tank Mixtures: 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 in 10 to 20 gallons of water or 10 to 60 gallons of nitrogen solution per acre:

2,4-D	DISTINCT®	MARKSMAN®
ATRAZINE	DUAL <sup>®</sup> MAGNUM <sup>®</sup>	<b>OUTLOOK<sup>®</sup></b>
AXIOM®	DUAL II MAGNUM	PROWL <sup>®</sup> H <sub>2</sub> O
BALANCE®	FULTIME™	<b>PYTHON®</b>
BANVEL <sup>®</sup> / CLARITY <sup>®</sup>	HARNESS®	SIMAZINE
BICEP <sup>®</sup> MAGNUM <sup>®</sup>	HARNESS XTRA	SURPASS®
BICEP II MAGNUM	HARNESS XTRA 5.6L	
CHARGER MAX®	LEADOFF®	
DEGREE XTRA™	LINEX <sup>®</sup> / LOROX <sup>®</sup>	

For improved burndown, this product may be tank mixed with 2,4-D or dicamba.

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

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 to 18 fl. oz. 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. When using nitrogen solutions as the carrier, use rate may need to be increased for acceptable weed control.

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

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. This area includes from Route 50 South in Illinois and Indiana and the following states: Alabama, Arkansas, Delaware, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, New Jersey, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia and West Virginia.

THE TANK MIX RECOMMENDATIONS IN THIS SECTION ARE NOT REGISTERED IN CALIFORNIA.

#### Hooded Sprayers

<u>USE INSTRUCTIONS</u>: This product may be used through hooded sprayers for weed control between the rows of corn (all), including field corn, sweet corn and popcorn. Only hooded sprayers that completely enclose the spray pattern may be used. See additional instruction for the use of hooded sprayers in the "SELECTIVE EQUIPMENT" section of this label.

<u>PRECAUTION:</u> 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.

<u>RESTRICTIONS</u>: Corn must be at least 12 inches tall, measured without extending leaves. Do not apply more than 1.5 pts. of this product per acre for each application and no more than 4.5 pts. per acre per year for hooded sprayer applications.

## Spot Treatment

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

<u>PRECAUTION</u>: 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.

RESTRICTION: Do not treat more than 10 percent of total field area to be harvested.

#### Preharvest

<u>USE INSTRUCTIONS</u>: Make applications at 35% 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 pts. of this product per acre. For aerial applications, apply up to 3 pts. of this product per acre.

<u>PRECAUTION</u>: Preharvest application is not recommended for corn grown for seed, as a reduction in germination or vigor may occur.

RESTRICTION: Allow a minimum of 7 days between application and harvest.

#### Postharvest

<u>USE INSTRUCTIONS</u>: 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.

RESTRICTION: Allow a minimum of 7 days between treatment and harvest or feeding of treated

#### Cotton

**Types of applications:** Those listed in the "ANNUAL AND PERENNIAL CROPS" section of this label plus the following: Selective equipment, spot treatment, preharvest.

For Roundup Ready cotton and Roundup Ready Flex cotton, see the "ROUNDUP READY CROPS" section of this label.

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

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

## Hooded Sprayer, Selective Equipment

<u>USE INSTRUCTIONS</u>: This product may be applied through hooded sprayers, recirculating sprayers, shielded applicators or wiper applicators in cotton.

#### RESTRICTION: Allow at least 7 days between application and harvest.

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

#### Spot Treatment

<u>USE INSTRUCTIONS</u>: For spot treatments, apply this product prior to boll opening of cotton.

<u>PRECAUTION</u>: The crop receiving the spray in the treated area will be killed. Take care to avoid drift or spray outside target area for the same reason.

<u>RESTRICTIONS</u>: Do not treat more than 10 percent of the total field area to be harvested.

#### Preharvest

<u>USE INSTRUCTIONS</u>: 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 of this label. For cotton regrowth inhibition, apply 0.75 to 3 pts. of this product per acre.

Up to 3 pts. of this product may be applied using either aerial or ground spray equipment. Apply after sufficient bolls have developed to produce the desired yield of cotton. Applications made prior to this time could affect maximum yield potential.

This product may be tank mixed with DEF<sup>®</sup> 6, Folex<sup>®</sup>, Ginstar<sup>®</sup> or Prep<sup>™</sup> to provide additional enhancement of cotton leaf drop.

<u>PRECAUTION</u>: Preharvest application is not recommended for cotton grown for seed, as a reduction in germination or vigor may occur.

<u>RESTRICTIONS:</u> Allow a minimum of 7 days between application and harvest of cotton. THE USE OF ADDITIVES FOR PREHARVEST APPLICATION OF THIS PRODUCT TO COTTON IS PROHIBITED.

## Fallow Systems

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

#### Chemical Fallow

<u>USE INSTRUCTIONS</u>: This product may be applied during the fallow period prior to planting or emergence of any crop listed on this label. This product may be used as a substitute for tillage to control annual weeds in fallow fields. Also, broadcast or spot treatments will control or suppress many perennial

weeds in fallow fields. Ground or aerial application equipment may be used. Tank mixtures with 2,4-D and dicamba may be used. Applications up to 3 pts. per acre may be made by aerial application in fallow sites where there is sufficient buffer to prevent injury due to drift onto adjacent crops.

<u>RESTRICTIONS</u>: For any crop not listed on this label, applications must be made at least 30 days prior to planting. DO NOT APPLY DICAMBA TANK MIXTURES BY AIR IN CALIFORNIA.

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

#### Preplant Fallow Beds

<u>USE INSTRUCTIONS</u>: 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 of this label.

In addition, 9 fluid ounces of this product plus 2 to 3 ounces of Goal<sup>™</sup> 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 3 ounces 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, shepherd's purse.

#### Aid-to-Tillage

<u>USE INSTRUCTIONS</u>: 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.

PRECAUTION: Tank mixtures with residual herbicides may result in reduced performance.

#### Grain Sorghum (Milo)

**Type of applications:** Those listed in the "ANNUAL AND PERENNIAL CROPS" section of this label plus the following: Spot treatment, over-the-top wiper applicators, preharvest.

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

<u>USE INSTRUCTIONS</u>: This product may be applied alone or in a tank mixture before, during or after planting grain sorghum. Applications must be made prior to emergence of the crop.

Tank Mixtures: This product may be applied in tank mixtures with the following products. Apply in 10 to 20 gallons of water or 10 to 60 gallons of nitrogen solution per acre:

ATRAZINE	CHARGER MAX®
BICEP II MAGNUM	DUAL II MAGNUM

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

For difficult to control annual 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 1 to 1.5 pints

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. When using nitrogen solutions as the carrier, the use rate may need to be increased for acceptable weed control.

#### Spot Treatment and Over-the-top Wiper Applications

<u>USE INSTRUCTIONS:</u> 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.

<u>PRECAUTION</u>: For spot treatment, 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.

<u>RESTRICTIONS</u>: For spot treatment, do not treat more than 10 percent of the total field area to be harvested.

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

<u>USE INSTRUCTIONS</u>: 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. See additional instruction for the use of hooded sprayers in the "SELECTIVE EQUIPMENT" section of this label.

Treat before milo sends tillers between the drill rows. If such tillers are contacted with the spray solution, the main plant may be killed. 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.

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.

<u>RESTRICTIONS</u>: Milo must be at least 12 inches tall, measured without extending leaves. Do not graze or feed milo forage or fodder following applications of this product through hooded sprayers. Do not apply more than 1.5 pts. of this product per acre per application and no more than 4.5 pts. per acre per year for hooded sprayer applications.

#### Preharvest

<u>USE INSTRUCTIONS:</u> Make applications at 30% grain moisture or less. As with other herbicides that cause sudden plant death, avoid preharvest applications of this product to milo infected with charcoal rot as lodging can occur.

<u>PRECAUTION</u>: Preharvest application is not recommended for sorghum grown for seed, as a reduction in germination or vigor may occur.

<u>RESTRICTIONS</u>: Do not apply more than 3 pts. of this product per acre. Allow a minimum of 7 days between application and harvest of sorghum. The use of this product for preharvest grain sorghum (milo) is not registered in California.

#### Postharvest

<u>USE INSTRUCTIONS</u>: This product may be applied after harvest of grain sorghum. 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.

This product may be applied to grain sorghum (milo) stubble following harvest to suppress or control regrowth. Apply 1.5 pts. of this product per acre for control, or 1 pint of this product per acre for suppression.

<u>RESTRICTION</u>: Allow a minimum of 7 days between treatment and harvest or feeding of treated vegetation.

Herbs

Labeled crops: Peppermint, spearmint.

**Types of applications:** Those listed in the "ANNUAL AND PERENNIAL CROPS" section of this label plus the following: Over-the-top wiper application, and spot treatment.

## **Over-the-top Wiper Applicators or Spot Treatments**

<u>USE INSTRUCTIONS</u>: This product may be used as a spot treatment or wiper application in spearmint and peppermint. Applications may be repeated on the same area at 30-day intervals. Apply spot treatments on a spray-to-wet basis with hand-held equipment, such as backpack and knapsack sprayers, pump-up pressure sprayers, handguns, handwands or any other hand-held or motorized spray equipment used to direct the spray solution onto a limited area. In wiper applications, the applicator should be adjusted so that the wiper contact point is at least 2 inches above the crop. Weeds should be a minimum of 6 inches taller than the crop.

<u>PRECAUTIONS</u>: For spot treatment, 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. In wiper applications, contact of the herbicide solution with the crop may result in damage or destruction.

<u>RESTRICTIONS</u>: Allow at least 7 days between application and harvest. For spot treatment applications, do not apply this product to more than 10 percent of the total field area to be harvested.

#### Peanuts

**Types of applications:** Those listed in the "ANNUAL AND PERENNIAL CROPS" section of this label plus the following: Weed control, site preparation.

#### Weed Control, Site Preparation

<u>USE INSTRUCTIONS</u>: This product may be applied for weed control or for site preparation prior to planting or transplanting peanuts.

#### Pineapple

**Types of applications:** Those listed in the "ANNUAL AND PERENNIAL CROPS" section of this label plus the following: Weed control, site preparation.

#### Weed Control, Site Preparation

<u>USE INSTRUCTIONS</u>: This product may be applied for weed control or for site preparation prior to planting or transplanting pineapples.

<u>RESTRICTIONS</u>: Do not feed or graze treated pineapple forage following application.

#### Soybeans

**Types of applications:** Those listed in the "ANNUAL AND PERENNIAL CROPS" section of this label plus the following: Spot treatment, preharvest, and selective equipment.

For Roundup Ready soybeans, see the "ROUNDUP READY CROPS" section of this label.

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

<u>Use instructions:</u> This product may be applied alone or in a tank mixture before, during or after planting soybeans. Applications must be made prior to emergence of the crop.

Tank Mixtures: This product may be applied with the following products in 10 to 20 gallons of water per acre:

AIM™	DUAL II MAGNUM
ASSURE <sup>®</sup> II	FIRSTRATE™
AUTHORITY®	FLEXSTAR®
BOUNDARY™	FUSION™
CANOPY®	GAUNTLET™
CANOPY XL®	LASSO / ALACHLOR
CHARGER MAX®	LINEX
COMMAND®	LOROX / LINURON
DUAL MAGNUM	LOROX PLUS®

OUTLOOK PROWL H<sub>2</sub>O PURSUIT® PURSUIT PLUS® REFLEX® SCEPTER® VALOR®

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.

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

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 1 to 1.5 pints 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.

<u>RESTRICTION:</u> THE TANK MIX RECOMMENDATIONS IN THIS SECTION ARE NOT REGISTERED IN CALIFORNIA.

## Spot Treatment

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

<u>PRECAUTION</u>: 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.

RESTRICTION: Do not treat more than 10% of the total field area to be harvested.

#### Preharvest

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

Apply at rates given in the annual, perennial and woody brush and trees rate tables. This product may be applied using either aerial or ground spray equipment. Apply after pods have set and lost all green color. Care should be taken to avoid excessive seed shatter loss due to ground application equipment.

<u>PRECAUTION</u>: Preharvest application is not recommended for soybeans grown for seed as a reduction in germination or vigor may occur.

<u>RESTRICTIONS</u>: Do not apply more than 3.75 quarts per acre of this product for preharvest applications. Do not apply more than 3 pts. per acre of this product by air. Allow a minimum of 7 days between application and harvest of soybeans. Do not graze or harvest treated hay or fodder for livestock feed within 25 days of last preharvest application. (If the application rate is 1.5 pints per acre or lower, the

## Selective Equipment

<u>USE INSTRUCTIONS</u>: This product may be applied through recirculating sprayers, shielded applicators, hooded sprayers, wiper applicators or sponge bars in soybeans.

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.

RESTRICTION: Allow at least 7 days between application and harvest.

#### Sugarcane

**Types of applications:** Those listed in the "ANNUAL AND PERENNIAL CROPS" section of this label plus the following: Spot treatment.

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

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

<u>RESTRICTION</u>: Do not apply to vegetation in or around ditches, canals or ponds containing water to be used for irrigation.

## Spot Treatment

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

<u>PRECAUTION:</u> Avoid spray contact with healthy cane plants since severe damage or destruction may result.

<u>RESTRICTION</u>: Do not feed or graze treated sugarcane foliage following application.

#### Fallow Treatments

<u>USE INSTRUCTIONS</u>: 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 3.75 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. Ground or aerial application equipment may be used. Applications up to 4.5 pts. per acre may be made by aerial application in fallow sites where there is sufficient buffer to prevent injury due to drift onto adjacent crops. Tank mixtures with 2,4-D and dicamba may be used.

#### Hooded Sprayers

<u>USE INSTRUCTIONS</u>: This product may be used through hooded sprayers for weed control between rows of sugarcane.

See the "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label for additional use instructions.

<u>PRECAUTIONS</u>: Do not allow treated weeds to come in contact with the crop. Droplets, mist, foam or splatter of the herbicide solution settling on the crop may result in discoloration, stunting or destruction. SUCH DAMAGE SHALL BE THE SOLE RESPONSIBILITY OF THE APPLICATOR.

Types of applications: Those listed in the "ANNUAL AND PERENNIAL CROPS" section of this label.

<u>USE INSTRUCTIONS</u>: This product may be applied before, during or after planting sunflowers. Applications must be made prior to the 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.

<u>RESTRICTIONS</u>: Do not apply more than 1.5 pts. of this product per acre for sunflowers. Make only one preplant or pre-emergent application per year. Do not feed or graze sunflower forage following application of this product.

#### Vegetable Crops

**Types of applications:** Chemical fallow, preplant fallow beds, preplant, pre-emergence, prior to transplanting vegetables, at-planting, selective equipment in row middles (hooded or shielded sprayers, or wiper applicators), directed applications (in nonbearing ginseng), over-the-top wipers (rutabagas only).

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

#### **Brassica Vegetables**

LABELED CROPS: Broccoli (all), Cabbage (all), Cabbage (Chinese), Brussels Sprouts, Cauliflower, Cavalo Broccolo, Collards, Kale, Kohlrabi, Mizuna, Mustard Greens, Mustard Spinach, and Rape Greens.

#### **Bulb Vegetables**

LABELED CROPS: Garlic, Leek, Onion, and Shallot.

<u>RESTRICTION</u>: For garlic, apply prior to planting and allow at least 3 days between application and planting.

#### Cucurbit Vegetables

LABELED CROPS: Cucumber, Gherkin, Gourds, Melons (all), Muskmelon (includes cantaloupe, casaba melon, crenshaw melon, honeydew melon, honey ball melon, mango melon, Persian melon), Pumpkin, Squash (summer, winter), and Watermelon.

RESTRICTION: Apply prior to planting and allow at least 3 days between application and planting.

#### Leafy Vegetables

LABELED CROPS: Amaranth, Arugula, Beet Greens, Cardoon, Celery, Celery (Chinese), Celtuce, Chard (Swiss), Chervil, Chrysanthemum, Corn Salad, Cress, Dandelion, Dock (sorrel), Endive, Fennel (Florence), Lettuce, Parsley, Purslane, Rhubarb and Spinach (all), and Watercress.

<u>RESTRICTION</u>: For watercress, apply prior to planting and allow at least 3 days between application and planting.

#### Fruiting Vegetables

LABELED CROPS: Eggplant, Ground Cherry, Okra, Pepinos, Pepper (all), Tomatillo, and Tomato.

RESTRICTION: Apply prior to planting and allow at least 3 days between application and planting.

#### Legume Vegetables (Succulent or dried):

LABELED CROPS: Beans (all), Chick Peas, Guar, Lentils, and Peas (all).

#### **Root & Tuber Vegetables:**

LABELED CROPS: Artichoke (Jerusalem), Garden Beets, Carrot, Celeriac, Chayote, Chicory, Ginseng, Horseradish, Oriental Radish, Parsnips, Potato (Irish), Radish, Rutabaga, Salsify, Sugar Beets (Non-Round Up Ready), Sweet Potato, Turnip, and Yams.

## Nonbearing ginseng (Direct Application):

USE INSTRUCTIONS: This product may be used for weed control in established nonbearing ginseng. Direct applications so that there is no contact of this product with the ginseng plant. Applications may be made with boom equipment, CDA, shielded sprayers, hand-held and high-volume wands, lances, orchard guns or with wiper application equipment.

<u>PRECAUTION:</u> 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 parts of desirable plants. Contact of this product with other than matured brown bark can result in serious crop damage.

RESTRICTION: Applications must be made at least one year prior to harvest.

#### Rutabagas (Over-the-Top Wiper Application)

USE INSTRUCTIONS: Wiper applicators may be used over-the-top in rutabagas.

RESTRICTION: Allow at least 14 days between application and harvest.

## TREE, VINE AND SHRUB CROPS (Alphabetical)

**NOTE:** THIS SECTION GIVES DIRECTIONS FOR USE OF THIS PRODUCT THAT APPLY TO ALL CITRUS CROPS, TREE FRUITS, TREE NUTS, VINE AND SHRUB CROPS GROUPED ALPHABETICALLY BELOW. SEE THE INDIVIDUAL CROP SECTIONS FOR INSTRUCTIONS, PREHARVEST INTERVALS, PRECAUTIONS AND RESTRICTIONS FOR SPECIFIC CROPS.

**TYPES OF APPLICATIONS:** Preplant (site preparation) broadcast sprays, middles (between rows of trees, vines or bushes), strips (within rows of trees, vines or bushes), selective equipment such as shielded sprayers and wiper treatments (except kiwi), perennial grass suppression, directed sprays, spot treatments, cut stump.

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

#### **USE INSTRUCTIONS:**

This product may be applied in middles, strips or for weed control in established citrus groves, tree fruit and tree nut groves, orchards, berries and vineyards. It may also be used for site preparation prior to planting or transplanting of these crops. Apply 0.75 pint to 3.75 quarts per acre according to the "ANNUAL WEEDS RATE TABLE" and "PERENNIAL WEEDS RATE TABLE" sections of this label. Utilize rates at the higher end of the specified rate range when weeds are stressed, growing in dense populations or are greater than 12 inches tall. Repeat applications may be made up to a maximum of 7.95 quarts 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.

## PRECAUTIONS:

- 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 parts of trees, canes and vines.
- Avoid applications when recent pruning wounds or other mechanical injury has occurred.
- Contact of this product with other than matured brown bark can result in serious crop damage or destruction.
- For applications in strips (within rows of trees), only selective equipment (directed sprays, hooded sprayers, shielded applicators, or wipers) should be used to minimize the potential for leakage or drift of herbicide sprays onto crops.
- Only shielded or directed sprayers may be used in crops with potential for crop contact, and then only where there is sufficient clearance.
- For berry crops, hooded or shielded sprayers must be fully enclosed including top, sides, front and back.
- Only wiper or shielded applicators capable of preventing all contact with crop may be used.

See "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label for additional directions and precautions.

RESTRICTION: Allow a minimum of 3 days between application and transplanting.

## Middles (between rows)

<u>USE INSTRUCTIONS</u>: This product will control or suppress annual and perennial weeds and ground covers growing between the 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.

<u>TANK MIXTURES</u>: 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 fl. oz/A of this product plus 3 to 12 oz/A of Goal 2XL will control annual weeds with a maximum height or diameter of 6 inches, including crabgrass, common groundsel, junglerice, common lambsquarters, redroot pigweed, London rocket, common ryegrass, shepherd's purse, annual sowthistle, filaree (suppression), horseweed/marestail (*Conyza canadensis*), stinging nettle and common purslane (suppression). 12 to 24 fl. oz/A of this product plus 3 to 12 oz/A of Goal 2XL will control common cheeseweed (malva) or hairy fleabane (*Conyza bonariensis*) with a maximum height or diameter of 3 inches.

## Strips (in rows)

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

DEVRINOL <sup>®</sup> 50 DF	SIMAZINE 4 L
DIREX <sup>®</sup> 4 L	SIMAZINE 80W
GOAL 2XL	SIM-TROL™ 4L
KARMEX DF	SOLICAM <sup>®</sup> DF
KROVAR I	SURFLAN™ AS
KROVAR II	SURFLAN 75W
PROWL	

<u>RESTRICTION:</u> Do not apply these tank mixtures in Puerto Rico.

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

#### Perennial Grass Suppression

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

For suppression of tall fescue, fine fescue, orchardgrass and quackgrass, apply 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 bermudagrass, apply 1.5 to 3 pts. of this product in 3 to 20 gallons of water per acre. Use this treatment only if reduction of the bermudagrass stand can be tolerated. When burndown is required prior to harvest, allow at least 21 days to ensure sufficient time for burndown to occur.

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

## Cut Stump (tree crops)

<u>USE INSTRUCTIONS</u>: Cut stump applications of this product may be made during site preparation or site renovation, prior to transplanting tree crops. This product will control regrowth of cut stumps and resprouts of many types of tree species, some of which are listed below.

<u>Citrus trees:</u> Calamondin, chironja, citron, citrus hybrids, grapefruit, kumquat, lemon, lime, mandarin (tangerine), orange (all), pummelo, tangelo, tangor.

<u>Fruit trees:</u> Apple, apricot, cherry (sweet, sour), crabapple, loquat, mayhaw, nectarine, olive, peach, pear, plum / prune (all), quince.

<u>Nut trees:</u> Almond, beechnut, Brazil nut, butternut, cashew, chestnut, chinquapin, filbert (hazelnut), hickory nut, macadamia, pecan, pistachio, walnut (black, English).

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% solution of this product to the freshly cut surface immediately after cutting. Delays in application may result in reduced performance. For best results, applications should be made during periods of active growth and full leaf expansion.

<u>PRECAUTIONS</u>: DO NOT MAKE CUT STUMP APPLICATIONS WHEN THE ROOTS OF ADJACENT DESIRABLE TREES MAY BE GRAFTED TO THE ROOTS OF THE CUT STUMP. INJURY RESULTING FROM ROOT GRAFTING MAY OCCUR IN ADJACENT TREES. Some sprouts, stems, or trees may

share the same root system. Adjacent trees having a similar age, height and spacing may signal shared roots. Whether grafted or shared, injury is likely to occur to non-treated stems/trees when one or more trees sharing common roots are treated.

#### **Berry Crops**

Labeled crops: Blackberry, blueberry, boysenberry, cranberry, currant, dewberry, elderberry, gooseberry, huckleberry, loganberry, olallieberry, raspberry (black, red), youngberry.

<u>PRECAUTION</u>: To avoid damage, herbicide sprays must not be allowed to contact desirable vegetation, including green shoots, canes or foliage.

<u>RESTRICTIONS:</u> Allow a minimum of 30 days between last application and harvest of cranberries. Allow a minimum of 14 days between last application and harvest of other berry crops. Do not make directed sprays within cranberry bush areas prior to berry harvest.

#### **Spot Treatment in Cranberry Production**

<u>USE INSTRUCTIONS</u>: Spot treatments may be used to control weeds growing in dry ditches (interior and perimeter) of cranberry production areas. Hand-held sprayer or other appropriate application equipment listed under "APPLICATION EQUIPMENT AND TECHNIQUES" in this label may be used. Drop water level to remove standing water in ditches prior to application. In hand-held sprayers, use 1 to 2% solution of this product. Spray to wet vegetation, not to run-off.

For treatments after draw down of water in dry ditches, allow 2 or more days after treatment before reintroduction of water to achieve maximum weed control.

Apply this product within 1 day after draw down to ensure application to actively growing weeds.

Use nozzles that emit medium to large-sized droplets to minimize drift in order to avoid crop injury.

<u>RESTRICTIONS</u>: Allow a minimum of 30 days between last application and harvest of cranberries. Do not apply this material through the irrigation system. Do not make applications by air. Do not apply directly to water.

#### **Postharvest Treatments in Cranberry Production**

<u>USE INSTRUCTIONS:</u> Application of this product may be made after the harvest of cranberries to control weeds growing within the field. Best results will be obtained if applications are made to vines that appear dormant (after they have turned red). Hand-held sprayers, wipers, or other appropriate application equipment listed under "APPLICATION EQUIPMENT AND TECHNIQUES" in this label may be used. If using hand-held sprayers, use a 0.375 to 0.75% solution of this product. Spray to wet vegetation, not to run-off. If using hand-held boom sprayers, apply 3 to 6 pts. of this product per acre.

<u>PRECAUTION:</u> Even though vines appear dormant, contact of the herbicide solution with desirable vegetation may result in damage or severe plant injury. Cranberry plants that are directly sprayed may be killed.

<u>RESTRICTIONS</u>: Make applications only after cranberries have been harvested. Do not treat more than 10% of the total bog. Allow a minimum of 6 months after last application and next harvest of cranberries. Do not apply this product through the irrigation system. Do not make applications by air. Do not apply directly to water.

## **Citrus Crops**

**Labeled crops:** Calamondin, chironja, citron, citrus hybrids, grapefruit, kumquat, lemon, lime, mandarin (tangerine), orange (all), pummelo, tangelo (ugli), tangor.

**Florida and Texas only:** For burndown or control of the weeds listed below, apply the specified 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 pts. of this product per acre. Apply in 20 to 30 gallons of water per acre when plants are actively growing. Use 3 pts. per acre when plants are less than 8 inches tall and 4.5 pts. when plants are greater than 8 inches tall. If goatweed is greater than 8 inches tall, the addition of Krovar<sup>®</sup> II or Karmex<sup>®</sup> may improve control. Refer to the individual product labels for specific crops, rates, geographic restrictions and precautionary statements.

## Perennial Weeds

PC = Partial Control C = Control Weed Species		Cornerstone® 5 Plus Rate per Acre			
		1.5 PT.	3 PT.	4.5 PT.	7.5 PT.
Bermudagrass	;	В	_	PC	С
Guineagrass	Texas & Florida Ridge	В	С	С	С
	Florida Flatwoods	-	В	С	С
Paragrass	1	В	С	С	С
Torpedograss		S	_	PC	С

<u>RESTRICTIONS</u>: Allow a minimum of 1 day between last application and harvest in citrus crops. In citron groves, apply as directed sprays only.

## Christmas Trees and Other Non-Food Tree Crops

Labeled crops: Pine, poplar eucalyptus, Christmas trees, and other non-food tree crops.

#### Post-directed, Spot Treatment, Wipers

<u>USE INSTRUCTIONS</u>: This product may be used as a post-directed spray and spot treatment around established poplar, eucalyptus, Christmas trees and other non-food tree crops.

<u>PRECAUTIONS</u>: Care must be exercised to avoid contact of spray, drift or mist with foliage or green bark of established Christmas trees and other pine trees. Desirable plants may be protected from the spray solution by using shields or coverings made of cardboard or other impermeable material.

UNLESS OTHERWISE DIRECTED, THIS PRODUCT IS NOT RECOMMENDED FOR USE AS AN OVER-THE-TOP BROADCAST SPRAY IN CHRISTMAS TREES AND OTHER PINE TREES.

#### Site Preparation

<u>USE INSTRUCTIONS</u>: This product may be used prior to planting Christmas trees. Take precautions to protect nontarget plants during site preparation applications.

#### Pome Fruit

Labeled crops: Apple, crabapple, loquat, mayhaw, pear (including oriental pear), quince.

<u>RESTRICTIONS:</u> Allow a minimum of 1 day between last application and harvest in pome crops.

#### Stone Fruit

Labeled crops: Apricot, cherry (sweet, sour), nectarine, olive, peach, plum/prune (all types).

<u>RESTRICTIONS</u>: Allow a minimum of 17 days between last application and harvest in stone fruit crops. For olive groves, apply as directed sprays only.

#### **Restrictions on Application Equipment**

For cherries, any application equipment listed above in the "TREE, VINE AND SHRUB CROPS" section under "TYPES OF APPLICATIONS" may be used in all states.

Any application equipment listed in the section referenced above 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 the states specified in the following paragraph. In all other states use wiper equipment only.

For peaches grown in Alabama, Arkansas, Florida, Georgia, Louisiana, Mississippi, North Carolina, South Carolina and Tennessee only, apply with a shielded boom sprayer or shielded wiper applicator, which prevents any contact of this product with the foliage or 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 that 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.

#### Tree Nuts

**Labeled crops:** Almond, beechnut, Brazil nut, butternut, cashew, chestnut, chinquapin, coconut, filbert (hazelnut), hickory nut, macadamia, pecan, pistachio, walnut (black, English).

<u>RESTRICTIONS:</u> Allow a minimum of 3 days between last application and harvest of tree nuts, except coconuts. Allow 14 days between application and harvest in coconut.

#### Tropical and Subtropical Trees and Fruit

**Labeled crops:** Atemoya, avocado, banana, Barbados cherry (acerola), biriba, blimbe, breadfruit, cacao (cocoa) bean, canistel, carambola (starfruit), cherimoya, coffee, dates, figs, guava, jaboticaba, jackfruit, longan, lychee, mango, marmaladebox (genip), papaya, persimmon, plantain, pomegranate, sapodilla, sapote (black, mamey, white), soursop, sugar apple, tamarind, tea.

<u>RESTRICTIONS</u>: Allow a minimum of 1 day between last application and harvest in banana, guava, papaya and plaintain crops. Allow a minimum of 14 days between last application and harvest for any tropical or subtropical tree fruit. Allow a minimum of 28 days between last application and harvest in coffee crops. In coffee and banana, delay applications 3 months after transplanting to allow the new coffee or banana plant to become established.

#### Bananacide (banana only)

<u>USE INSTRUCTIONS:</u> This product may be used to destroy banana plants infected with the Banana Bunchy Top Virus as well as non-infected banana plants to establish disease free buffers around plantations. Remove all fruit from the plants within the treatment area prior to treatment. Inject 0.04 fluid ounce (1 mL) of this product's concentrate per 2 to 3 inches of pseudostem diameter. Make the injection at least one foot above the ground, except for very small plants, which should be injected vertically into the top. Any subsequent regrowth must also be destroyed. All plants and mats (or units) adjacent (within a 4 foot radius) to a treated mat shall be mechanically destroyed. For control of the banana bunchy top virus, it is critical that the grower follow a strict control program involving monitoring for diseased plants, spraying to control the aphid vector, and destruction of all infected mats (or units). An infected plant may not show symptoms of the banana bunchy top virus for up to 125 days; therefore, it is critical that the entire mat (or unit) containing the diseased plant be destroyed immediately.

<u>RESTRICTIONS</u>: Do not apply more than 0.5 fluid ounce (15 mL) of this product's concentrate per mat (or unit). Remove all fruit from plants and mats (or units) following injection. Do not allow livestock to consume treated plant materials. Following transplant of new banana plants into treated areas, allow plants to become established for 3 months before applying this product for weed control.

## Vine Crops

Labeled crops: Grapes (raisin, table, wine), kiwi fruit, passion fruit.

<u>USE INSTRUCTIONS</u>: Apply this product for weed control only when green shoots, canes or foliage are not 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.

<u>RESTRICTIONS</u>: Allow a minimum of 14 days between last application and harvest in vine crops. Do not use selective equipment in kiwi.

## PASTURE GRASSES, FORAGE LEGUMES AND RANGELANDS

#### Alfalfa, Clover, and Other Forage Legumes

Labeled crops: Alfalfa, clover, kudzu, lespedeza, lupin, sainfoin, trefoil, velvet bean, vetch (all types).

**Types of applications:** Dormant (alfalfa only), preplant, pre-emergence, at-planting, spot treatment, wiper applications, renovation, preharvest.

For Roundup Ready alfalfa, see the "ROUNDUP READY CROPS" section of this label.

#### **Dormant (alfalfa only)**

<u>USE INSTRUCTIONS</u>: This product will control or suppress many weeds including quackgrass, downy brome, and cheatgrass in dormant alfalfa. Apply 6 to 9 fl. oz. per acre of this product. Apply in spring to alfalfa that is dormant. Apply after spring temperatures have warmed enough to encourage resumption of weed growth, but prior to initiation of trifoliate leaf expansion of the alfalfa. Applications made after expansion of the first trifoliate leaf of the alfalfa will cause growth reduction and reduced crop yield.

<u>PRECAUTION</u>: Application of this product can cause crop injury. Any such crop injury is the responsibility of the applicator. Do not use this product where a slight yield reduction in the first cutting of alfalfa cannot be tolerated. Slight discoloration of the alfalfa may occur, but the alfalfa will regreen and regrow under moist soil conditions as effects of this product wear off.

<u>RESTRICTIONS</u>: Do not use ammonium sulfate when spraying dormant alfalfa with Cornerstone® 5 Plus. Do not make more than one application per year. Allow 36 hours after application before grazing livestock or harvesting.

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

<u>USE INSTRUCTIONS</u>: This product may be applied before, during or after planting crops listed in this section. Applications must be made prior to emergence of the crop.

RESTRICTIONS: Remove domestic livestock before application. The crop may be fed or grazed as soon

as it reaches sufficient maturity.

## Preharvest

<u>USE INSTRUCTIONS</u>: This product may be used in declining stands or any stand where crop injury or destruction is acceptable. This product will control annual and perennial weeds, including quackgrass, when applied prior to harvest. Applications may be made at any time of the 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.

<u>PRECAUTIONS</u>: This application may destroy an alfalfa stand and may severely injure or destroy other labeled crops such as clover. Preharvest application is not recommended for alfalfa grown for seed, as a reduction in germination or vigor may occur.

<u>RESTRICTIONS</u>: Make only one application to an existing crop stand per year. The treated crop and weeds can be harvested and fed to livestock according to the intervals below.

	Maximum Single Application Rate	Minimum Interval Between Application and Harvest / Grazing
Alfalfa	3 pints per acre	36 hours
All other labeled legumes above	2.25 pints per acre	3 days

## Spot Treatment or Wiper Applications Over-the-top

<u>USE INSTRUCTIONS</u>: This product may be applied as a spot treatment or with wiper applicators. For additional information on wiper applicators, see the "SELECTIVE EQUIPMENT" section of this label. Applications may be made in the same area at 30-day intervals.

<u>RESTRICTIONS</u>: For spot treatment and wiper applications, apply in areas where the movement of domestic livestock can be controlled. No more than 10% of the total field may be treated at one time. Remove domestic livestock before application and wait 3 days after application before grazing livestock or harvesting.

## Renovation

<u>USE INSTRUCTIONS</u>: This product may be applied as a broadcast spray to renovate existing stands of alfalfa, clover, and other labeled forage legumes. If the crop is to be grazed or harvested for feed, use up to 3 pts. per acre in alfalfa and up to 2.25 pints per acre in other labeled legumes. For complete removal of established stands of clover it may be necessary to use the higher treatment rates listed in the "PERENNIAL WEEDS RATE TABLE" in this label.

<u>RESTRICTIONS</u>: When treatment rates of 3 pts. per acre for alfalfa or 2.25 pints per acre for other forage legumes are used, remove domestic livestock before application and wait 3 days after application before reintroduction. If treatment rates above these levels are necessary, do not graze or harvest treated foliage for livestock feed. Crops listed for treatment in this label may be planted into the treated area at any time; for other crops, wait 30 days between application and planting.

## Conservation Reserve Program (CRP)

**Types of applications:** Renovation (rotating out of CRP), site preparation, postemergence weed control in dormant CRP grasses, wiper applications over-the-top.

## Renovation (Rotating out of CRP), Site Preparation

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

## Postemergence Weed Control in Dormant CRP Grasses, Wiper Applications Over-the-Top

<u>USE INSTRUCTIONS</u>: 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 fl. oz. 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.

<u>PRECAUTION</u>: Some stunting of CRP perennial grasses will occur if broadcast applications are made when plants are not dormant.

<u>RESTRICTIONS</u>: No waiting period is required between application and grazing or harvesting for feed. Do not apply more than 4.5 pts. per acre per year onto CRP grasses.

#### Grass Seed or Sod Production

**Labeled crops:** Any grass (*Graminea* family) except corn, sorghum, sugarcane and those listed in this label under "Cereal and Grain Crops".

**Types of applications:** Preplant, pre-emergence, at-planting, renovation, site preparation, shielded sprayers, wiper applications over-the-top, spot treatments, creating rows in annual ryegrass.

<u>USE INSTRUCTIONS</u>: This product controls most existing vegetation prior to renovating turf or forage grass areas or establishing turf grass grown for sod. 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. Make applications before, during, or after planting or for renovation.

For maximum control of existing vegetation, delay planting to determine if any regrowth from escaped underground plant parts occurs. Where existing vegetation is growing under mowed turfgrass management, apply this product after omitting at least one regular mowing to allow sufficient growth for good interception of the spray. Where repeat treatments are necessary, sufficient regrowth must be attained prior to application. For warm-season grasses, such as bermudagrass, summer or fall applications provide best control. Broadcast equipment may be used to control sod remnants or other unwanted vegetation after sod is harvested.

PRECAUTION: Applications must be made prior to the emergence of the crop to avoid crop injury.

<u>RESTRICTIONS</u>: If application rates total 4.5 pts. per acre or less, no waiting period between treatment and feeding or livestock grazing is required. If the rate is greater than 4.5 pts. per acre, remove domestic livestock before application and wait 8 weeks after application before grazing or harvesting. For any crop not listed for treatment in this label, applications must be made at least 30 days prior to planting.

#### Shielded Sprayers

<u>USE INSTRUCTIONS:</u> Apply 1.5 to 4.5 pts. of this product in 10 to 20 gallons of water per acre to control weeds between grass seed 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 the protective shields.

For additional instructions, see "Shielded and Hooded Applicators" in the "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label.

<u>PRECAUTION:</u> 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.

#### Wiper Applications Over-the-Top

<u>USE INSTRUCTIONS</u>: 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. For additional instructions, see "Wiper Applicators" in the "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label.

<u>PRECAUTION:</u> Contact of the herbicide solution with desirable vegetation may result in damage or destruction.

#### Spot Treatments

<u>USE INSTRUCTIONS</u>: Use a 1.0 to 2.0% solution. Apply this product prior to heading of grasses grown for seed. Hand-held equipment may be used to control sod remnants or other unwanted vegetation after sod is harvested.

<u>PRECAUTION</u>: 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**

<u>USE INSTRUCTIONS</u>: Use 0.75 to 1.5 pints of this product per acre. Use the higher rate when the ryegrass is greater than 6 inches tall. Best results are obtained when applications are made before the ryegrass reaches 6 inches in height.

<u>PRECAUTIONS</u>: 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.

#### **Pasture Grasses**

**Labeled crops:** Any grass (*Gramineae* family) except corn, sorghum, sugarcane and those listed in this label under "Cereal and Grain Crops". Grasses that may be treated include bahiagrass, bermudagrass, bluegrass, brome, fescue, guineagrass, kikuyu grass, orchardgrass, pangola grass, ryegrass, timothy, wheatgrass.

**Types of applications:** Preplant, pre-emergence, spot treatment, wiper applications over-the-top, pasture renovation, postemergent weed control (broadcast treatments).

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

<u>USE INSTRUCTIONS</u>: This product may be applied prior to planting or emergence of forage grasses. In addition, this product may be used to control perennial pasture species listed on this label prior to replanting.

<u>RESTRICTIONS</u>: If application rates total 4.5 pts. per acre or less, no waiting period between treatment and feeding or livestock grazing is required. If the rate is greater than 4.5 pts. per acre, remove domestic livestock before application and wait 8 weeks after application before grazing or harvesting. Crops listed for treatment in this label may be planted into the treated area at any time; for other crops, wait 30 days between application and planting.

#### Spot Treatment and Wiper Applications Over-the-Top

<u>USE INSTRUCTIONS</u>: This product may be applied as a spot treatment or with wiper applicators in pastures. To achieve maximum performance, remove domestic livestock before application and wait 7

days after application before grazing livestock or harvesting. Applications may be made in the same area at 30-day intervals.

<u>RESTRICTIONS</u>: For spot treatments or wiper application methods using rates of 4.5 pts. per acre or less, the entire field or any portion of it may be treated. When spot treatments or wiper application are made using rates above 4.5 pts. per acre, no more than 10% of the total pasture may be treated at any one time.

# Postemergent Weed Control (Broadcast Treatments)

<u>USE INSTRUCTIONS</u>: This product may be used to suppress competitive growth and seed production of annual weeds and undesirable vegetation in pastures. For selective applications with broadcast spray equipment, apply 9 to 12 fl. oz. of this product per acre in early spring before desirable perennial grasses break dormancy and initiate green growth. Late fall applications can be made after desirable perennial grasses have reached dormancy.

<u>PRECAUTIONS</u>: Some stunting of perennial grasses will occur if broadcast applications are made when plants are not dormant. Use of higher application rates will cause stand reductions.

<u>RESTRICTIONS</u>: Do not apply more than 4.5 pts. per acre per year onto pasture grasses except for renovation uses (see instructions above). If replanting is needed due to severe stand reduction, applications must be made at least 30 days prior to planting any crop not listed for treatment in this label. No waiting period is required between application and grazing or harvesting for feed.

#### Rangelands

## Types of applications: Postemergence.

This product will control or suppress many annual weeds growing in perennial cool and warm-season grass rangelands. Preventing viable seed production is key to the successful control and invasion of annual grassy weeds in rangelands. Follow-up applications in sequential years should eliminate most of the viable seeds. Grazing of treated areas should be delayed to encourage growth of desirable perennials. Allowing desirable perennials to flower and reseed in the treated area will encourage successful transition.

<u>USE INSTRUCTIONS:</u> Apply 9 to 12 fl. oz. of this product per acre to control or suppress many weeds, including downy brome, cheatgrass, cereal rye and jointed goatgrass in rangelands. Apply when most brome plants are in early flower and before the plants, including seedheads, turn color. Allowing for secondary weed flushes to occur in the spring following rain events further depletes the seed reserve and encourages perennial grass conversion on weedy sites. Fall applications are possible, and recommended, where spring moisture is usually limited and fall germination allows for good weed growth.

For medusahead, apply 12 fl. oz. of this product per acre at the 3-leaf stage. Delaying applications beyond this stage will result in reduced or unacceptable control. Controlled burning may be useful in eliminating the thatch layer produced by slow decaying culms prior to application. Allow new growth to occur before spraying after a burn. Repeat applications in subsequent years may be necessary to eliminate the seedbank before reestablishing desirable perennial grasses in medusahead-dominated rangelands.

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

<u>RESTRICTIONS</u>: Do not use ammonium sulfate when spraying rangeland grasses with this product. No waiting period between treatment and feeding or grazing of livestock is required. Do not apply more than 4.5 pts. per acre per year.

### **ROUNDUP<sup>®</sup> READY CROPS**

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

USE THIS PRODUCT FOR POSTEMERGENCE APPLICATION ONLY ON CROP VARIETIES DESIGNATED AS CONTAINING THE ROUNDUP READY GENE.

Applying this product to crop varieties that 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 that 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 that provides tolerance to glyphosate. Information on Roundup Ready crop varieties may be obtained from your seed supplier. Roundup Ready crop varieties must be purchased from an authorized licensed seed supplier.

**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 spray nozzles. Check for even distribution of spray droplets.

**For aerial applications,** apply this product in 3 to 15 gallons of water per acre. See the "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label for procedures to avoid spray drift that may cause injury to any vegetation not intended for treatment. Use of appropriate buffer zones will help prevent injury to adjacent vegetation.

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

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

Tank mixtures with other herbicides, insecticides, fungicides, micronutrients or foliar fertilizers can result in reduced weed control or crop injury when applied as over-the-top applications.

Ammonium sulfate may be mixed with this product for applications to Roundup Ready crops. Refer to the "MIXING" section for use instructions for ammonium sulfate.

Sprayer preparation: It is important that sprayer and mixing equipment be clean and free of pesticide residue before making applications of this product. Follow the cleaning procedures specified on the label of the product(s) previously used. THOROUGHLY CLEAN THE SPRAY TANK AND ALL LINES AND FILTERS TO ELIMINATE POTENTIAL CONTAMINATION FROM OTHER HERBICIDES PRIOR TO MIXING AND APPLYING THIS PRODUCT.

**NOTE:** The following instructions are based on a clean start at planting by using a burndown application or tillage to control existing weeds before crop emergence. In no-till and stale seedbed systems, a preplant burndown treatment of this product is recommended to control existing weeds prior to crop emergence. Some weeds, such as black nightshade, broadleaf signalgrass, sicklepod, Texas panicum, sandbur, annual morningglory, woolly cupgrass, shattercane, wild proso millet, burcucumber, and giant ragweed with multiple germination times or suppressed (stunted) weeds may require a second application of this product for complete control. Make the second application after some regrowth has occurred and at least 10 days after a previous application of this product.

# Alfalfa with the Roundup Ready Gene

### Types of applications: Preplant, at-planting, pre-emergence, postemergence

Maximum Allowable Combined Application Quantities F	er Season
Combined total per year for all applications, including preplant during year	5.75 quarts per acre
of establishment	
Combined total per year for in-crop applications for newly established and	4.5 quarts per acre (144 fl.
established stands	oz. per acre)
Total of preplant, at-planting, pre-emergence and postemergence single	1.5 quarts per acre
applications	

#### **USE INSTRUCTIONS:**

This product will control many troublesome emerged weeds with over-the-top applications in Roundup Ready alfalfa.

#### Application rates for new stand establishment (seeding year):

Prior to the first cutting, apply 1.5 quarts of this product per acre from emergence up to 4 trifoliate leaves. Apply up to 1.5 quarts of this product per acre from 5 trifoliate leaves up to 5 days before the first cutting.

After the first cutting, apply up to 1.5 quarts per acre for an in-crop application, per cutting, up to 5 days before cutting.

#### Application rates for established stands (non-seeding year):

Apply up to 1.5 quarts per acre for an in-crop application, per cutting, up to 5 days before cutting.

There are no rotation crop restrictions following applications of this product. For any crop NOT listed in the label, applications must be made at least 30 days prior to planting.

#### Over-the-top applications:

This product may be applied post-emergence to Roundup Ready alfalfa from emergence until 5 days prior to cutting. For any single over-the-top application of this product do not exceed 1.5 quarts per acre.

During stand establishment, due to the biology and breeding constraints of alfalfa, up to 10% of the seedlings may not contain the Roundup Ready gene and will not survive after the first application of this product. To eliminate the undesirable effects of stand gaps created by the loss of plants not containing a Roundup Ready gene, make a single application of at least 0.75 quart per acre of this product at or before the 3 to 4 trifoliate growth stage.

In both newly seeded and established stands, in order to maximize yield and quality potential of forage and hay, make applications of this product after weeds have emerged but before alfalfa growth or regrowth interferes with application spray coverage of the target weeds.

<u>PRECAUTION</u>: Where Roundup Ready alfalfa is grown with a companion or cover crop, or is over seeded with a second species, over-the-top application of this product will eliminate the non-Roundup Ready species.

<u>Weeds controlled:</u> For specific rates of application and instructions for control of various annual and perennial weeds, refer to the "ANNUAL WEEDS RATE TABLE" and the "PERENNIAL WEEDS RATE TABLES" of this label. Some weeds with multiple germination times or suppressed (stunted) weeds may require a second application of this product for complete control. The second application should be made after some re-growth of weeds has occurred.

In addition to those weeds listed in this label, this product will suppress or control the parasitic weed, Dodder (*Cuscuta spp.*) in Roundup Ready alfalfa. Repeat applications may be necessary for complete

control.

<u>RESTRICTIONS</u>: Do not exceed 1.5 quarts of this product per acre when making applications by air. Any single over-the-top application of this product must not exceed 1.5 quarts (48 fluid ounces) per acre. Make sequential applications of this product at least 7 days apart. Remove domestic livestock before application and wait a minimum of 5 days after last application before grazing, or cutting and feeding of Roundup Ready alfalfa forage and hay.

## Canola with the Roundup Ready Gene

**Types of applications:** Preplant, at-planting, pre-emergence, postemergence.

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, EXCEPT FOR USES IN WILDLIFE FOOD PLOTS THAT WILL BE HARVESTED FOR HUMAN OR LIVESTOCK FOOD.

Maximum Allowable Combined Application Quantities Per Season	
Preplant, at-planting, pre-emergence applications	3 pts. per acre
Total in-crop applications from emergence to 6-leaf stage	1.5 pts. per acre

See the "ROUNDUP READY CROPS" section of this label for additional precautionary instructions for use in Roundup Ready crops.

## Preplant, Pre-emergence and At-planting

<u>USE INSTRUCTIONS</u>: This product may be applied before, during or after planting canola.

#### Postemergence

<u>USE INSTRUCTIONS</u>: This product may be applied postemergence to Roundup Ready canola from emergence through the 6-leaf stage of development. Applications made during bolting or flowering may result in crop injury and yield loss. To maximize yield potential, make applications early to eliminate competing weeds.

<u>Weeds controlled:</u> For specific rates of application and instructions, refer to the "ANNUAL WEEDS RATE TABLE" and the "PERENNIAL WEEDS RATE TABLES" of this label.

Single Application – Apply 12 to 24 fl. oz. per acre no later than the 6-leaf stage for the control of annual weeds. Avoid overlapping applications that may result in temporary yellowing, delayed flowering, and/or growth reduction. Similar injury may result when applications of more than 12 fl. oz. per acre are applied after the 4-leaf stage.

Sequential Applications – Apply 24 fl. oz. per acre to 1- to 3-leaf canola followed by a sequential application at a minimum interval of 10 days, but no later than the 6-leaf stage. Sequential applications are recommended for early emerging annual weeds and perennial weeds such as Canada thistle and quackgrass or when controlling weeds with multiple applications times.

<u>RESTRICTIONS</u>: No more than two over-the-top broadcast applications may be made from crop emergence through the 6-leaf stage of development and the total in-crop application may not exceed 48 fl. oz. per acre. Allow a minimum of 60 days between last application and canola harvest.

# Corn with the Roundup Ready Gene

## 1: ROUNDUP READY CORN

# Do not combine the following instructions with instructions for use on Roundup Ready Corn 2. For Roundup Ready Corn 2, see specific instructions below.

**Types of applications:** Preplant, at-planting, pre-emergence, postemergence, spot treatment, preharvest, postharvest.

Maximum Allowable Combined Application Quantities Per Season	
Combined total per year for all applications	6 quarts per acre
Preplant, at-planting, pre-emergence applications	3.75 quarts per acre
Total in-crop applications from emergence through the V8 stage or 30 inches	1.5 quarts per acre
Maximum preharvest application rate after maximum kernel fill is complete and the crop is physiologically mature (black layer formation) until 7 days before harvest	0.75 quart per acre

See the "ROUNDUP READY CROPS" section of this label for additional precautionary instructions for use in Roundup Ready crops.

## Preplant, Pre-emergence and At-planting

<u>USE INSTRUCTIONS</u>: This product may be applied alone or in a tank mixture before, during or after planting.

<u>TANK MIXTURES</u>: This product may be tank mixed with Bullet, Degree, Degree Xtra, Harness, Harness Xtra, Harness Xtra 5.6L, Lariat, Lasso or Micro-Tech at 50 to 100% of labeled rate. It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

**NOTE:** For maximum weed control, a postemergence (in-crop) application of this product should be applied following the use of less than labeled rates of the pre-emergence residual products listed above.

# Postemergence (in-crop)

<u>USE INSTRUCTIONS</u>: This product may be applied postemergence to Roundup Ready corn from emergence through the V8 stage (8 leaves with collars) or until corn height reaches 30 inches, whichever comes first.

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 applications of this product. Make the postemergent application of 18 to 24 fl. oz. per acre of this product before the weeds reach a height and/or density that the weeds become competitive with the crop, generally 4 inch tall weeds or less.

This product may be applied alone as a postemergence in-crop application to provide control of emerged weeds listed on this label. If new flushes of weeds occur, a sequential application of this product at 18 to 24 fl. oz. per acre will control the labeled grasses and broadleaf weeds.

<u>TANK MIXTURES</u>: This product may be applied in tank mixture with Degree Xtra, Harness, Harness Xtra, and Harness Xtra 5.6L at 50 to 100% of labeled rate. This product may be applied in tank mixture with Permit<sup>®</sup> and atrazine at labeled rates. It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

Tank-mix Partner	Maximum Height of Corn for Application
Degree Xtra	11 inches
Harness	
Harness Xtra	
Harness Xtra 5.6L	
Permit	30 inches
Atrazine	12 inches

<u>RESTRICTIONS</u>: Single in-crop applications of this product are not to exceed 1.5 pts. per acre. Sequential in-crop applications of this product from emergence through the V8 stage or 30 inches must not exceed 3 pts. per acre per growing season. Allow a minimum of 10 days between in-crop applications of this product. Allow a minimum of 50 days between application of this product and harvest of corn forage.

# Preharvest

<u>USE INSTRUCTIONS</u>: In Roundup Ready corn, up to 1.5 pts. per acre of this product can be applied preharvest. 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).

<u>RESTRICTIONS</u>: Allow a minimum of 7 days between treatment and harvest or feeding of treated vegetation.

#### Postharvest

<u>USE INSTRUCTIONS</u>: This product may be applied after harvest of corn. 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.

<u>RESTRICTIONS</u>: Allow a minimum of 7 days between treatment and harvest or feeding of treated vegetation. Do not apply pre-harvest if more than 3 pts. per acre has been previously applied in over-the-top or drop nozzle application in crop.

# 2. ROUNDUP READY CORN 2

# The following instructions refer to Roundup Ready Corn 2, and must not be combined with instructions above for Roundup Ready Corn not designated as "2".

The use of higher in-crop rates described in this section on other than Roundup Ready Corn 2 may cause crop injury and reduce yields.

TYPES OF APPLICATIONS: Preplant, At-Planting, Pre-emergence, Postemergence (In-Crop), Spot Treatment Preharvest, Post-Harvest.

Maximum Allowable Combined Application	Quantities Per Season
Combined total per year for all applications	6 quarts per acre
Preplant, Pre-emergence, At-Planting applications	3.75 quarts per acre
Single in-crop application	2.25 pints per acre
Total in-crop applications from emergence through the 48 inch stage	4.5 pints per acre
Maximum preharvest application rate after maximum kernel fill is complete and the crop is physiologically mature (black layer formation) until 7 days before harvest	1.5 pints per acre

See the "ROUNDUP READY CROPS" section of this label for additional precautionary instructions for use in Roundup Ready crops.

# Preplant, Pre-emergence, At-Planting

<u>USE INSTRUCTIONS</u>: This product may be applied alone or in a tank mixture before, during or after planting corn.

<u>TANK MIXTURES</u>: This product may be tank mixed with Bullet, Degree<sup>®</sup>, Degree Xtra, Harness, Harness Xtra, Harness Xtra 5.6L, Lariat, Lasso or Micro-Tech at 50 to 100 percent of labeled rate. It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

**NOTE:** For maximum weed control, a postemergence (in crop) application of this product should be applied following the use of less than labeled rates of the pre-emergence residual products listed above.

### Pre-emergence followed by post-emergence weed control

Follow directions for pre-emergence applications above, and post-emergence applications below. Make the post emergence application before weeds reach a height or density that is competitive with the corn. Observe limits on total product applied per year.

# **Postemergence (In-Crop)**

<u>USE INSTRUCTIONS</u>: This product may be applied over-the-top or with drop nozzles to Roundup Ready Corn 2 from emergence through the V8 stage (8 leaves with collars) or until corn reaches 30 inches in height, whichever comes first. When corn reaches 24 to 30 inches tall, drop nozzles are recommended for optimum spray coverage and weed control. When corn reaches 30 to 48 inches tall, apply ONLY with drop nozzles adjusted to avoid spraying into the whorls of the corn plants. Refer to tables above for rates of Cornerstone® 5 Plus and mixtures for the specific weeds to be controlled.

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. Make the postemergent application of 18 to 24 fl. oz. per acre of this product before the weeds reach a height and/or density that the weeds become competitive with the crop, generally 4 inch tall weeds or less.

This product may be applied alone as a postemergence in-crop application to provide control of emerged weeds listed on this label. If new flushes of weeds occur, a sequential application of this product at 18 to 24 fl. oz. per acre will control the labeled grasses and broadleaf weeds.

<u>TANK MIXTURES</u>: This product may be applied in tank mixture with Degree Xtra, Harness, Harness Xtra, and Harness Xtra 5.6L at 50 to 100 percent of labeled rate. This product may be applied in tank mixture with Permit and atrazine at labeled rates. It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

Tank-mix Partner	Maximum Height of Corn for Application
Degree Xtra	11 inches
Harness	
Harness Xtra	
Harness Xtra 5.6L	
Permit	30 inches
atrazine	12 inches

<u>RESTRICTIONS</u>: Single in-crop applications of this product are not to exceed 1.5 pts. per acre. Sequential in-crop applications of this product from emergence through the V8 stage or 30 inches must not exceed 3 pts. per acre per growing season. Allow a minimum of 10 days between in-crop applications of this product. Allow a minimum of 50 days between application of this product and harvest of corn forage.

## Preharvest

<u>USE INSTRUCTIONS</u>: In Roundup Ready corn, up to 1.5 pts. per acre of this product can be applied preharvest. 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).

<u>RESTRICTIONS</u>: Allow a minimum of 7 days between application and harvest, feeding, or grazing. Do not apply pre-harvest if more than 3 pts. per acre has been previously applied in over-the-top or drop nozzle application in crop.

#### Post-Harvest

<u>USE INSTRUCTIONS</u>: This product may be applied after harvest of corn. 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.

<u>RESTRICTIONS:</u> Allow a minimum of 7 days between treatment and harvest or feeding of treated vegetation.

## Cotton with the Roundup Ready Gene

The following instructions should not be combined with instructions for use on Roundup Ready Flex Cotton. For Roundup Ready Flex Cotton, see the "Cotton with the Roundup Ready Flex Gene" section of the label.

**Types of applications:** Preplant, at-planting, pre-emergence, over-the-top, selective equipment, preharvest.

Maximum Allowable Combined Application Quantities Per Season	
Combined total per year for all applications	6 quarts per acre
Preplant, at-planting, pre-emergence applications	3.75 quarts per acre
Total in-crop applications from ground cracking to layby	3 quarts per acre
Maximum preharvest application rate	1.5 quarts per acre

See the "ROUNDUP READY CROPS" section of this label for additional precautionary instructions for use in Roundup Ready crops.

<u>RESTRICTIONS</u>: The combined total application of this product from cotton emergence until harvest must not exceed 4.5 quarts per acre. NO MORE THAN TWO OVER-THE-TOP BROADCAST APPLICATIONS

MAY BE MADE FROM CROP EMERGENCE THROUGH THE 4-LEAF (NODE) STAGE OF DEVELOPMENT. MAKE NO MORE THAN TWO APPLICATIONS FROM THE 5-LEAF STAGE THROUGH LAYBY. SEQUENTIAL IN-CROP OVER-THE-TOP OR POST-DIRECTED APPLICATIONS OF THIS PRODUCT MUST BE AT LEAST 10 DAYS APART AND COTTON MUST HAVE AT LEAST TWO NODES OF INCREMENTAL GROWTH BETWEEN APPLICATIONS. ALLOW A MINIMUM OF 7 DAYS BETWEEN APPLICATION AND HARVEST.

## Preplant, At-planting and Pre-emergence

<u>USE INSTRUCTIONS</u>: This product may be applied before, during or after planting cotton.

## Over-the-Top

<u>USE INSTRUCTIONS</u>: This product may be applied by aerial or ground application equipment at rates up to 0.75 quart per acre per application postemergence to Roundup Ready cotton from the ground cracking stage until the 4-leaf (node) stage of development (until the fifth true leaf reaches the size of a quarter). Over-the-top applications made after the 4-leaf (node) stage of development may result in boll loss, delayed maturity and/or yield loss.

<u>PRECAUTION:</u> The use of additional surfactant in the spray solution may result in crop injury and reduced yield and is not recommended for over-the-top applications of this product to Roundup Ready cotton.

**Salvage treatment:** This treatment may be used after the 4-leaf stage of development and should only be used where weeds threaten to cause the loss of the crop. 0.75 quart 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 SIGNIFCANT BOLL LOSS, DELAYED MATURITY AND/OR YIELD LOSS. MAKE NO MORE THAN ONE SALVAGE TREATMENT PER GROWING SEASON.

NOTE: For specific rates of application and instructions, refer to the "ANNUAL WEEDS RATE TABLE" and "PERENNIAL WEEDS RATE TABLE" in this label.

See the "ROUNDUP READY CROPS" section of this label for additional precautionary instructions for use in Roundup Ready crops.

#### Selective Equipment

<u>USE INSTRUCTIONS</u>: This product may be applied using precision post-directed or hooded sprayers at rates up to 0.75 quart per acre per application to Roundup Ready cotton through layby. At this stage, use post-directed equipment 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).

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.

#### Preharvest

<u>USE INSTRUCTIONS</u>: This product may be applied for preharvest annual and perennial weed control as a broadcast treatment to Roundup Ready cotton after 20 percent boll crack. Up to 1.5 qts. of this product may be applied using either aerial or ground spray equipment. **NOTE**: This product will not enhance the performance of harvest aids when applied to Roundup Ready cotton.

<u>RESTRICTIONS</u>: Allow a minimum of 7 days between application and harvest of cotton. THE USE OF ADDITIVES FOR PREHARVEST APPLICATION OF THIS PRODUCT TO ROUNDUP READY COTTON IS PROHIBITED.

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

# Cotton with the Roundup Ready Flex Gene

The directions for use for this product provided in this section are specific to and may only be used with varieties designated as Roundup Ready Flex cotton. The use of over-the-top applications described in this section on cotton varieties other than Roundup Ready Flex cotton will cause crop injury and reduced yields.

DO NOT combine the directions for use in this section with those in the "Cotton with the Roundup Ready Gene" section of this label, or with any other Roundup Ready cotton or Roundup Ready Flex cotton directions for use on labeling for this or other glyphosate-containing products.

Drift of this product from an application made to Roundup Ready Flex cotton onto adjacent fields of post 4-leaf (node) Roundup Ready cotton may cause extensive crop injury, including boll loss, delayed maturity and/or yield loss.

Maximum Application Rates		
Combined total per year for all applications	6 quarts per acre	
Total of all Preplant, At-Planting, Pre-emergence applications	3.75 quarts per acre	
Total of all in-crop applications from cracking to 60 percent open bolls	4.5 quarts per acre	
Total of all in-crop applications between layby and 60 percent open bolls	1.5 quarts per acre	
Total of all in-crop applications from 60 percent open bolls to 7 days prior to harvest	1.5 quarts per acre	
Total of all in-crop applications from emergence through harvest	4.5 quarts per acre	

**TYPES OF APPLICATION:** Preplant, At-Planting, Pre-emergence, Postemergence (In-crop), Preharvest

See the "ROUNDUP READY CROPS" section of the label for additional information regarding the use of this product in Roundup Ready crops. See the "PRODUCT INFORMATION" section of this label for more information on maximum application rates.

When applied in accordance with these label directions Cornerstone<sup>®</sup> 5 Plus will control labeled annual grasses and broadleaf weeds in Roundup Ready Flex cotton. Many perennial weeds will be controlled or suppressed with one or more applications of this product. To maximize yield potential, eliminate competing weeds early. For specific rates of application and additional instructions for control of various annual and perennial weeds, refer to the "ANNUAL WEEDS RATE TABLE" and the "PERENNIAL WEEDS RATE TABLES" sections of the label.

# Preplant, At-Planting, Pre-emergence

USE INSTRUCTIONS: This product may be applied before, during or after planting Roundup Ready Flex cotton.

RESTRICTIONS: The maximum quantity of this product that may be applied for all preplant, at-planting

and pre-emergence applications combined is 3.75 quarts per acre per season.

# Postemergence (In-crop)

USE INSTRUCTIONS: Use an initial application rate of 24 fluid ounces (0.75 quarts) per acre to control or suppress 1 to 3 inch tall annual grasses and broadleaf weeds. This product may be applied postemergence to Roundup Ready Flex cotton using ground application equipment at rates up to 36 fluid ounces (1.125 quarts) per acre per application. In addition to broadcast application, post-directed spray equipment may be used to achieve more thorough weed coverage.

<u>PRECAUTIONS</u>: In-crop application rates above 24 fluid ounces (0.75 quarts) per acre made alone or with the addition of other crop chemical products containing surfactant may cause a crop response including leaf speckling or leaf necrosis.

DO NOT EXCEED A SURFACTANT CONCENTRATION 0.5% BY WEIGHT (2 QUARTS PER 100 GALLONS OF SPRAY SOLUTION) WHEN MAKING AN OVER-THE-TOP IN-CROP APPLICATION TO ROUNDUP READY FLEX COTTON.

<u>RESTRICTIONS</u>: The maximum single, in-crop application rate of this product to Roundup Ready Flex cotton using ground application equipment is 36 fluid ounces (1.125 quarts) per acre. Do not exceed a maximum rate of 24 fluid ounces (0.75 quarts) of this product per acre when using aerial application equipment. Between layby and 60 percent open bolls, the maximum combined total application rate of this product is 48 fluid ounces (1.5 quarts) per acre. The maximum combined total of all applications of this product made from crop emergence to 60 percent open bolls must not exceed 4.5 quarts per acre.

# **Preharvest**

<u>USE INSTRUCTIONS:</u> Up to 48 fluid ounces (1.5 quarts) of this product per acre may be applied to Roundup Ready Flex cotton for annual and perennial weed control prior to harvest after 60 percent boll crack.

**NOTE:** This product will not enhance the performance of harvest aids when applied to Roundup Ready Flex cotton.

PRECAUTION: DO NOT EXCEED A SURFACTANT CONCENTRATION 0.5% BY WEIGHT (2 QUARTS PER 100 GALLONS OF SPRAY SOLUTION) WHEN MAKING AN OVER-THE-TOP IN-CROP APPLICATION TO ROUNDUP READY FLEX COTTON.

<u>RESTRICTIONS</u>: Allow a minimum of 7 days between application and harvest of Roundup Ready Flex cotton.

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

# Soybeans with the Roundup Ready Gene

**Types of applications:** Preplant, at-planting, pre-emergence, postemergence, preharvest, postharvest.

Maximum Allowable Combined Application Quantities Per Season	
Combined total per year for all applications	6 quarts per acre
Preplant, at-planting, pre-emergence applications	3.75 quarts per acre
Total in-crop applications from cracking throughout flowering	4.5 pts. per acre

Maximum preharvest application rate	1.5 pts. per acre	

See the "ROUNDUP READY CROPS" section of this label for additional precautionary instructions for use in Roundup Ready crops.

## Preplant, Pre-emergence and At-planting

<u>USE INSTRUCTIONS</u>: This product may be applied before, during or after planting soybeans.

## Postemergence

<u>USE INSTRUCTIONS:</u> When applied as directed, this product will control labeled annual grasses and broadleaf weeds in Roundup Ready soybeans. Applications of this product can be made in Roundup Ready soybeans from emergence (cracking) throughout flowering. Refer to the "ANNUAL WEEDS RATE TABLE" in this label for application rates for specific annual weeds. An initial application of 1.5 pts. per acre will control or suppress most 2 to 8-inch-tall weeds. Weeds will generally be 2 to 8 inches tall, 2 to 5 weeks after planting. If the initial application is delayed and weeds are larger, apply a higher rate of this product. This product may be used up to 3 pts. per acre in any single in-crop application for control of annual weeds and where heavy weed densities exist.

A 1.5 to 3 pts. per acre rate (single or multiple applications) of this product will control or suppress perennial weeds such as: Bermudagrass, Canada thistle, common milkweed, field bindweed, hemp dogbane, horsenettle, marestail (horseweed), nutsedge, quackgrass, rhizome johnsongrass, redvine, trumpetcreeper, swamp smartweed and wirestem multy. For best results, allow perennial weed species to achieve at least 6 inches of growth before spraying with this product.

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 may be necessary to control late flushes of weeds. IN THE SOUTHERN STATES, A SEQUENTIAL APPLICATION OF THIS PRODUCT WILL BE REQUIRED TO CONTROL NEW FLUSHES OF WEEDS IN THE ROUNDUP READY SOYBEAN CROP. To control giant ragweed apply 1.5 pts. per acre of this product when the weed is 8 to 12 inches tall to increase control and possibly avoid the need for a sequential application.

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

<u>RESTRICTIONS</u>: The combined total application from crop emergence through harvest must not exceed 4.5 pts. per acre. The maximum rate for any single in-crop application is 3 pts. per acre. The maximum combined total of this product that can be applied during flowering is 3 pts. per acre.

#### Preharvest

<u>USE INSTRUCTIONS</u>: This product provides weed control when applied prior to harvest of soybeans. Up to 1.5 pts. per acre of this product can be applied by aerial or ground application.

<u>PRECAUTION:</u> Care should be taken to avoid excessive seed shatter loss due to ground application equipment.

<u>RESTRICTION</u>: Allow a minimum of 14 days between final application and harvest of soybeans or feeding of soybeans, forage or hay.

### Postharvest

<u>USE INSTRUCTIONS</u>: This product may be applied after harvest of Roundup Ready soybeans. 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.

# Sugar Beet with the Roundup Ready Gene \*

TYPES OF APPLICATIONS: Preplant, At-Planting, Preemergence, Postemergence (In-crop)

Annual Maximum Allowable Application Rates	
Combined total per year for all application	6 quarts per acre
Preplant, Preemergence applications	3.75 quarts per acre
Emergence to 8 leaf stage	1.875 quarts per acre
Between 8 leaf stage and canopy closure	1.5 quarts per acre

See the "ROUNDUP READY CROPS" section of this label for additional precautionary instructions for use in Roundup Ready crops. Tank mixtures of this product with herbicides, insecticides or fungicides may result in crop injury or reduced weed control.

## Preplant, At-Planting, Preemergence

<u>USE INSTRUCTIONS</u>: This product may be applied before, during or after planting of Roundup Ready sugar beets.

<u>RESTRICTION</u>: The maximum quantity of this product that may be applied for all preplant, at-planting and preemergence applications combined is 3.75 quarts per acre per season.

## **Postemergence (In-crop)**

<u>USE INSTRUCTIONS</u>: This product may be applied over the top of Roundup Ready sugar beets for control of annual grasses and broadleaf weeds from emergence to 30 days prior to harvest. To maximize yield potential, spray sugar beets early to eliminate competing weeds. Up to 4 sequential applications of this product may be made with at least 10 days between applications. 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.

<u>RESTRICTIONS</u>: Follow all precautionary instructions for use in Roundup Ready crops.

- The combined total application from crop emergence through harvest must not exceed 3.375 quarts per acre.
- The maximum rate for any single application between emergence to the 8 leaf stage is 2.25 pts. per acre.
- The maximum rate for any single application between the 8 leaf stage and canopy closure is 1.5 pts. per acre.
- Allow a minimum of 30 days between last application and sugar beet harvest.
- For any crop NOT listed on this label, applications must be at least 30 days prior to planting.

### \*This product is not registered by California for use on sugar beet.

#### NONCROP USES AROUND THE FARMSTEAD

**Types of applications:** Non-selective weed control, trim-and-edge, greenhouse / shade house, chemical mowing, cut stumps, habitat management.

#### Weed Control and Trim-and-Edge

<u>USE INSTRUCTIONS</u>: 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.

<u>TANK MIXTURES</u>: This product may be tank mixed with the following products. It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank mixing.

Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

For annual weeds, use 1.5 pts. per acre of this product when weeds are less than 6 inches tall, 2.25 pts. per acre when weeds are 6 to 12 inches tall and 3 pts. per acre when weeds are greater than 12 inches tall. For perennial weeds, apply 3 to 7.5 pts. per acre in these tank mixes. For tank mixtures with these products through backpack sprayers, handguns or other high-volume spray-to-wet applications, see the "ANNUAL WEEDS – HAND-HELD OR HIGH VOLUME EQUIPMENT" section of this label for specified rates.

ARSENAL®	PLATEAU®
BANVEL / CLARITY	PRINCEP
BARRICADE <sup>®</sup> 65WG	RONSTAR <sup>®</sup> 50 WSP
DIURON	SAHARA®
ENDURANCE®	SIMAZINE
ESCORT®	SURFLAN
KARMEX DF	TELAR®
KROVAR I DF	VANQUISH®
OUST®	2,4-D
PENDULUM <sup>®</sup> 3.3 EC	
PENDULUM WDG	

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

# Greenhouse / Shade House

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

#### **Chemical Mowing**

<u>USE INSTRUCTIONS</u>: This product will suppress perennial grasses listed in this section to serve as a substitute for mowing. Use 4.5 fl. oz. of this product per acre when treating Kentucky bluegrass. Use 6 fl. oz. of this product per acre when treating tall fescue, fine fescue, orchardgrass, bahiagrass or quackgrass covers. Use 12 fl. oz. of this product per acre when treating bermudagrass. Use 48 fl. oz. of this product per acre when treating treatments in 10 to 20 gallons of spray solution per acre. Chemical mowing applications may be made along farm ditches and other parts of farmsteads.

<u>PRECAUTION</u>: Use only in areas where some temporary injury or discoloration of perennial grasses can be tolerated.

#### Cut Stumps

Types of application: Treating cut stumps in any noncrop site listed on this label.

<u>USE INSTRUCTIONS</u>: 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% solution of this product to the freshly cut surface immediately after cutting. Delays in application may result in reduced performance. For best results, applications should be made during periods of active growth and full leaf expansion.

Alder
Eucalyptus
Madrone
Oak

Reed, giant Saltcedar Sweetgum Tanoak

Willow

<u>PRECAUTION:</u> Some sprouts, stems or trees may share the same root system. Adjacent trees having a similar age, height and spacing may signal shared roots. Whether grafted or shared, injury is likely to occur to non-treated stems / trees when one or more trees sharing common roots are treated.

<u>RESTRICTIONS</u>: 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.

#### Habitat Management

**Types of uses:** Habitat restoration and maintenance, wildlife food plots.

## Habitat Restoration and Maintenance

<u>USE INSTRUCTIONS</u>: 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 boadspectum vegetation control requirements in habitat management areas. Spot treatments can be made to selectively remove unwanted plants for habitat maintenance and enhancement. The tank mixtures listed in this "NONCROP USES AROUND THE FARMSTEAD" section of this label may be used for habitat restoration and maintenance.

#### Wildlife Food Plots

<u>USE INSTRUCTIONS</u>: 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.

#### 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 APPICATIONS ARE RECOMMENDED.

Apply to actively growing annual weeds. Annual weeds are generally easiest to control when they are small.

Older, mature (hardened) annual weed species may require higher rates even if they meet the size requirements.

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.

This product may be used up to 36 fl. oz. per acre where heavy weed densities exist.

	Cornerstone® 5 Plus Rate – Fluid Ounces per Acre				
WEED SPECIES	12	18	24	30	36
	N	laximum H	eight / Len	gth (in incl	nes)
Ammannia, purple	3"	6"	12"	-	18"
Annoda, spurred	-	2"	3"	5"	8"
Barley	18"	18" +	-	-	-
Barnyardgrass	-	3"	6"	7"	9"
Bassia, fivehook	-	-	6"	-	-
Beggarweed, Florida	-	5"	8"	-	-
Bittercress	12"	20"	-	-	-
Bluegrass, annual	10"	-	-	-	-
Bluegrass, bulbous	6"	-	-	-	-

Bromo downy 12	6"	12"	1		
Brome, downy <sup>1,2</sup>	6"	12	- 24"	-	-
Brome, Japanese				-	-
Browntop panicum	6"	8"	12"	-	24"
Buckwheat, wild <sup>3</sup>	-	1"	2"	-	-
Burcucumber	-	6"	12"	-	18"
Buttercup	12"	20"	-	-	-
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"
		2"	4"	-	6"
Copperleaf, Virginia	-			-	
Coreopsis, plains	-	6"	12"	-	18"
Corn, volunteer	6"	12"	20"	-	-
Corn speedwell	12"	-	-	-	-
Crabgrass	3"	6"	12"	-	-
Crowfootgrass	-	-	6"	-	12"
Cutleaf, evening primrose	-	-	3"	-	6"
Devilsclaw (unicorn plant)	-	3"	6"	-	-
Dwarfdandelion	12"	-	-	-	-
Eastern mannagrass	8"	12"	-	-	-
Eclipta	-	4"	8"	12"	-
Fall panicum	4"		6"		- 12"
	4	-		-	
Falsedandelion	-	20"	-	-	-
Falseflax, small seed	12"	-	-	-	-
Fiddleneck	-	6"	12"	-	-
Field pennycress	6"	12"	-	-	-
Filaree	-	-	6"	-	12"
Fleabane, annual	6"	20"	-	-	-
Fleabane, hairy	-	-	6"	-	10"
(Conyza bonariensis)					
Fleabane, rough	3"	6"	12"	-	-
Florida pusley		-	4"	-	6"
Foxtail: giant, bristly, yellow	6"	12"	20"	-	-
Foxtail, Carolina	10"	-	-	-	-
	12"	-	-	_	-
Foxtail, green				-	
Goatgrass, jointed	6"	12"	-	-	-
Goosegrass	-	3"	6"	-	12"
Grain sorghum (milo)	6"	12"	20"	-	-
Groundcherry	-	3"	6"	-	9"
Groundsel, common	-	6"	10"	-	-
Hemp sesbania	-	2"	4"	6"	8"
Henbit	-	-	6"	-	12"
Horseweed / Marestail <sup>6</sup>	-	6"	12"	-	18"
(Conyza canadensis)					
Itchgrass	6"	8"	12"	-	18"
Jimsonweed		-	12"	-	18"
Johnsongrass, seedling	6"	12"	18"	-	24"
Junglerice		3"	6"	- 7"	9"
	-	5	6"		9 12"
Knotweed	-	-	6" 12"	-	
Kochia <sup>4</sup>	-	3 - 6"		-	-
Lambsquarters	-	6"	12"	-	20"
Little barley	6"	12"	-	-	-
London rocket	6"	-	24"	-	-
Mayweed	-	2"	6"	12"	18"
Morningglory, annual	-	-	3"	-	6"
(Ipomoea spp.)		1	1	1	1

Mustard, blue	6"	12"	18"	-	-
Mustard, tansy	6"	12"	18"	-	-
Mustard, tumble	6"	12"	18"	-	-
Mustard, wild	6"	12"	18"	-	-
Nightshade, black	-	4"	6"	-	12"
Nightshade, hairy	-	4"	6"	-	12"
Oats	3"	6"	18"	-	-
Pigweed species	-	12"	18"	24"	-
Prickly lettuce	-	6"	12"	-	-
Purslane	-	-	3"	-	6"
Ragweed, common	-	6"	12"	-	18"
Ragweed, giant	-	6"	12"	-	18"
Red rice	-	-	4"	-	-
Russian thistle	-	6"	12"	-	-
Rye, volunteer / cereal <sup>2</sup>	6"	18"	18+"	-	-
Ryegrass	-	-	6"	-	12"
Sandbur, field	6"	12"	-	-	-
Sandbur, longspine	6"	12"	-	-	-
Shattercane	6"	12"	20"	-	-
Shepherd's purse	6"	12"	-	-	-
Sicklepod	-	2"	4"	-	8"
Signalgrass, broadleaf	-	3"	6"	7"	9"
Smartweed, ladysthumb	-	-	6"	-	9"
Smartweed, Pennsylvania	-	-	6"	-	9"
Sowthistle, annual	-	-	6"	-	12"
Spanishneedles	-	-	6"	-	12"
Speedwell, purslane	12"	-	-	-	-
Sprangletop	6"	12"	20"	-	-
Spurge, prostrate	-	6"	12"	-	-
Spurge, spotted	-	6"	12"	-	-
Spurry, umbrella	6"	-	-	-	-
Stinkgrass	-	12"	-	-	-
Sunflower	12"	18"	-	-	-
Swinecress	-	5"	12"	-	-
Teaweed / Prickly sida	-	2"	4"	-	6"
Texas panicum	6"	8"	12"	-	24"
Thistle, Russian <sup>5</sup>	-	6"	12"	-	-
Velvetleaf	-	-	6"	-	12"
Virginia pepperweed	-	18"-	-	-	-
Waterhemp	-	-	6"	-	12"
Wheat <sup>2</sup>	6"	12"	18"	-	-
Wheat (overwintered)	-	6"	12"	-	18"
Wild oats	3"	6"	18"	-	-
Wild proso millet	-	6"	12"	-	18"
Witchgrass	-	12"	-	-	-
Woolly cupgrass	-	6"	12"	-	-
Yellow rocket	-	12"	20"	-	-

<sup>1</sup> For control of downy brome in no-till systems, use 12 fl. oz. 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 fl. oz. per acre of this product to control wild buckwheat in the cotyledon to 2-leaf stage. Use 24 fl. oz. 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 fl. oz. followed by 24 fl. oz. of this product per acre.

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

- <sup>5</sup> Control of Russian thistle may vary based on environmental conditions and spray coverage. Whenever possible, a tank mixture with 2,4-D as described below may improve control.
- <sup>6</sup> For control of glyphosate resistant horseweed / marestail in cotton, corn and soybeans refer to "CONTROL AND MANAGEMENT OF GLYPHOSATE RESISTANT HORSEWEED (MARESTAIL, Conyza Canadensis) IN CORN, COTTON AN SOYBEANS" section below.

## Annual Weeds – Rates for 10 to 40 Gallons per Acre

Apply 1.5 to 2.25 pts. of this product per acre. Use 1.5 pts. per acre if weeds are less than 6 inches tall, and 2.25 pts. per acre if weeds are over 6 to 12 inches tall. These rates will provide control of weeds listed in the "ANNUAL WEEDS RATE TABLE" when water carrier volumes are 10 to 40 gallons per acre for ground applications. Older, mature (hardened) annual weed species may require higher rates even if they meet the size requirements.

## Annual Weeds – Tank Mixtures with 2,4-D, Dicamba or Tordon™

9 to 12 fl. oz. of this product plus 0.25 pound a.i. of dicamba or 0.5 pound a.i. of 2,4-D or 1 to 2 fluid ounces of Tordon per acre will control the following weeds with maximum height or length indicated: 6" - prickly lettuce, marestail / horseweed (*Conyza canadensis*), morningglory (*Ipomoea spp.*), kochia (dicamba only), wild buckwheat (Tordon only); 12" - cocklebur, lambsquarters, pigweed, Russian thistle (2,4-D only).

12 fl. oz. of this product plus 0.5 pound a.i. of 2,4-D per acre will control the following weeds when they are the maximum height or length of 6 inches: common ragweed, giant ragweed, Pennsylvania smartweed, and velvetleaf.

Some crop injury may occur if dicamba or Tordon is applied within 45 days of planting.

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

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

# Annual Weeds – Hand-Held or High-Volume Equipment

For control of weeds listed in the "ANNUAL WEEDS RATE TABLE", apply a 0.375% 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 0.75% solution.

For best results, use a 1.5% solution on harder-to-control perennials, such as bermudagrass, dock, field bindweed, hemp dogbane, milkweed and Canada thistle.

When using application methods that result in less than complete coverage, use a 3.6% solution for annual and perennial weeds and a 3.6 to 7.5% solution for woody brush and trees.

### Annual Weeds – Tank Mixtures with Atrazine for Fallow and Reduced Tillage Systems

For use only in Colorado, Kansas, Nebraska, Oklahoma, Oregon, South Dakota and Washington – In Oregon and Washington, do not exceed 1 pound of atrazine per acre.

18 to 21 fl. oz. of this product plus 1 to 2 pounds of atrazine per acre will control the following weeds: Barnyardgrass (requires 21 fl. oz. for control), downy brome, green foxtail, lambsquarters, prickly lettuce, tansy mustard, pigweed, field sandbur, stinkgrass, Russian thistle, volunteer wheat, witchgrass and kochia (add 0.20 pound a.i. of dicamba for control).

# Control and Management of Glyphosate Resistant Horseweed (Marestail, Conyza canadensis) in Corn, Cotton and Soybeans

For ground applications, use 10 to 20 gallons of water per acre. For aerial applications, use 3 to 15 gallons of water per acre.

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

## CORN

**Preplant, at-planting, pre-emergence:** Apply a tank mixture of this product (24 fl. oz. per acre) plus 2,4-D (0.5 pounds of a.i. per acre) before horseweed exceeds 6 inches in height. See the 2,4-D product label for time intervals that are required between application and planting.

Atrazine (1 to 2 pounds of a.i. per acre) may be included in the tank mixture to provide residual control. Refer to the atrazine product label for specific use instructions.

**In-crop (Roundup Ready Corn hybrids only):** For in-crop Roundup Ready corn, apply a tank mixture of this product (24 fl. oz. per acre) plus Clarity (8 to 16 fl. oz. per acre) or 2,4-D (0.5 to 1.0 pounds a.i. per acre). Apply between corn emergence and the 5-leaf stage of growth (approximately 8 inches tall).

# COTTON

**Preplant:** For control of horseweed, apply this product (24 fl. oz. per acre) in a tank mix with Clarity (8 fl. oz. per acre). This application must be made 21 to 35 days before planting and before horseweed reaches 6 inches in height. In order to avoid crop injury, a minimum interval of 21 days during which there is at least 1 inch of cumulative rainfall must be observed between Clarity application and planting of cotton.

**Post-directed (Roundup Ready Cotton varieties only):** Management of early season weed competition and the development of a crop height differential between cotton and the horseweed is often achieved by a combination of preplant burndown and postemergent over-the-top and/or directed applications of Cornerstone® 5 Plus herbicide. These measures enhance the development of a height differential that is necessary to successfully make post-directed treatments. In-crop post-directed applications of MSMA (2 pounds a.i. per acre) tank mixed with diuron (0.5 to 0.75 pounds a.i. per acre) should be made when the temperature is 80°F or higher.

## SOYBEANS

**Preplant:** Apply a tank mixture of this product (24 fl. oz. per acre) with 2,4-D (0.5 pounds a.i. per acre) before horseweed exceeds 6 inches in height. See the 2,4-D product label for time intervals that are required between application and planting. For areas where 2,4-D product cannot be applied due to application restrictions or proximity to a sensitive crop, contact your local retailer or Winfield Solutions representative.

# 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 the stages specified.

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 growth.

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

Weeds Species	Cornerstone® 5 Plus Rate (Pt/A)	Water Volume (GPA)	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. Follow applications 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)	_	_	0.75 - 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.
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 provides best results.
Bermudagrass	4.5 – 7.5	3 - 20	1.5%	For control, apply 7.5 pts. of this product per acre. For partial control, apply 4.5 pts. per acre. Treat when bermudagrass is actively growing and seedheads are present. Retreatment may be necessary to maintain control.
Bermudagrass, water (knotgrass)	1.5 to 2.25	5 - 10	1.5%	<ul> <li>Apply 2.25 pts. of this product in 5 to 10 gallons of water per acre. Apply when water bermudagrass is 12 to 18 inches in length. Allow 7 or more days before tilling, flushing or flooding the field.</li> <li>Fall applications only: Apply 1.5 pts. 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 bermudagrass that is 12 to 18 inches in length.</li> <li>This product is not registered in California for use on water bermudagrass</li> </ul>
Bindweed, field	0.75 – 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 pts. of this product per acre west of the Mississippi River and 4.5 to 6 pts. east of the Mississippi River. Apply when weeds are at or beyond full bloom. For best results, apply in late summer or fall. Fall treatments must be applied before a killing

				frost.
				Also for control, apply 3 pts. of this product plus 0.5 pound a.i. of dicamba 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 pts. 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 growing and the majority of runners are 12 inches or more in length. The use of at least one irrigation will promote active bindweed growth.
				For suppression, apply 12 fl. oz. 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.
				<b>In California only,</b> apply 1.5 to 7.5 pts. 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 pts. of this product in 3 to 10 gallons of water per acre. Apply to bindweed that has reached a length of 12 inches or greater. Allow a maximum weed emergence and runner growth. Allow 3 or more days after application before tillage.
Bluegrass, Kentucky	1.5 - 3	3 - 40	1.5%	Apply 3 pts. of this product in 10 to 40 gallons of water per acre when most plants have reached boot to early seedhead development. For partial control in pasture or hay crop renovation, apply 1.5 to 2.25 pts. 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 pts. of this product per acre west of the Mississippi River and 4.5 to 6 pts. 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	0.75 – 1.25%	Apply to fully expanded fronds which are least 18 inches long.
Bromegrass, smooth	1.5 - 3	3 - 40	1.5%	Apply 3 pts. 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 pts. of this product in 3 to 10 gallons of water per

				acre. Apply to actively growing plants when most have reached 4 to 12 inches in height.
Bursage, woolly- leaf	-	3 - 20	1.5%	For control, apply 3 pts. of this product plus 0.5 pound a.i. of dicamba per acre. For partial control, apply 1.5 pts. of this product plus 0.5 pound a.i. of dicamba 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. Also for control, apply 12 to 24 fl. oz. of this product plus 0.5 to 1 pound a.i. of 2,4-D in 3
Cogongroop	45 75	10 10	1 50/	to 10 gallons of water per acre.
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. Also for control, apply 12 fluid ounces of this product plus 0.5 pound a.i. of 2,4-D in 3 to 10
Dock, curly	4.5 - 7.5	3 - 40	1.5%	gallons of water per acre.Apply when most plants have reached the early bud stage of growth.Also for control, apply 12 to 24 fl. oz. of this product plus 0.5 to 1 pound a.i of 2,4-D in 3 to
Dogbane, hemp	6	3 - 40	1.5%	<ul> <li>10 gallons of water per acre.</li> <li>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.</li> <li>For suppression, apply 12 fl. oz. 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.</li> </ul>
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 pts. of this product per acre when most plants have reached boot to early seedhead stage of development.
				Fall applications only: Apply 1.5 pts. 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 0.75 pint per acre of this product will improve long-term control and control of seedlings germinating after fall treatments or the following spring.
Guineagrass	3 - 4.5	3 - 40	0.75%	Apply when most plants have reached at least the 7-leaf stage of growth. Ensure thorough coverage when using hand-held equipment. In Texas and the ridge of Florida, use 3 pts. for control. In the flatwoods region of Florida, 4.5 pts. is required.
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	-	-	1.25 – 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	0.75 - 4.5	3 - 40	0.75%	<ul> <li>In annual cropping systems apply 1.5 to 3 pts. of this product per acre. Apply 1.5 pts. of this product in 3 to 10 gallons of water per acre. Use 3 pts. 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 pts. of this product in 10 to 40 gallons of water per acre.</li> <li>For best results, apply when most plants have reached boot to head stage of growth or in the fall prior to frost. Allow 7 or more days after application before tillage. Do not tank mix with residual herbicides when using 1.5 pts. per acre.</li> <li>For burndown of Johnsongrass, apply 0.75 pint of this product in 3 to 10 gallons of water per acre before the plants reach a height of 12 inches. For this use, allow at least 3 days after treatment before tillage.</li> <li>Spot treatment (partial control or suppression) – Apply a 0.75% solution of this product when Johnsongrass is 12 to 18 inches in height. Coverage should be uniform and complete.</li> </ul>
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 late summer or fall.
Lantana	-	-	0.75 - 1%	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.

of water per ace. Use 3 pts. 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 ill between harvest and fall applications or in the fall or spring or prior to spring applications. Allow 3 or more days after application before tillage.Mullein, common4.5 - 7.53 - 201.5%Apply when most plants are in the early bud stage.Napiergrass4.5 - 7.53 - 201.5%Apply when most plants are in the early bud stage.Nightshade, silverleaf33 - 101.5%Apply when most plants are in the early head stage.Nutsedge; purple, yellow0.75 - 4.53 - 400.75 - 1.5%Apply stolution for control of nutsedg plants and immature nutlets attached to treatments must be applied before a killing frost.Nutsedge; purple, yellow0.75 - 4.53 - 400.75 - 1.5%Apply stolution for control of nutsedg plants and immature nutlets attached to treatment. Repeat treatments will be required for long-term control of nutsedg plants and immature nutlets attached to treatment. Repeat treatments will be required for long-term control of upset provide control. Make applications solution for control of nutsedg plants and inches tail). Repeat this application, as necessary, when newly emerging plants are in the 3 to 5-leaf stage (less than 6 inches tail). Repeat this application, as necessary when newly emerging plants reaches and for a dual application, as to 5-leaf stage. Subsequent applications will be necessary for long-term control of existing plants, apply 12 fl. oz. to 3 pt. of this product in 3 to 40 gallons of water per acre. Treat when plants	Muhly, wirestem	1.5 - 3	3 - 40	1.5%	Use 1.5 pts. of this product in 3 to 10 gallons
Mullein, common4.5 - 7.53 - 201.5%Apply when most plants are in the early bud stage.Napiergrass4.5 - 7.53 - 201.5%Apply when most plants are in the early head stage.Nightshade, silverleaf33 - 101.5%Applications should be made when at least 60% of the plants have berries. Fall treatments must be applied before a killing frost.Nutsedge; purple, yellow0.75 - 4.53 - 400.75 - 1.5%Apply 4.5 pts. of this product per acre or appl a 0.75 to 1.5% solution for control of nutsedg plants and immature nutlets attached to treated plants. Treat when plants are in flow or when new nutlets can be found at rhizome tips. Nutlets which have not germinated will not be controlled and may germinate after treatment. Repeat treatments will be required for long-term control of ungerminated tubers.Sequential applications: 1.5 to 3 pts. 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 fol long-term control.For partial control of existing plants, apply 12 fl. oz. to 3 pts. of this product in 3 to 40 gallons of water per acre. Treat when plants have a 3 to 5 leaves and most are less than 6 inches tall. Repeat treatments will be required for long-term control.					of water per acre. Use 3 pts. of this product when applying 10 to 40 gallons of water per acre or in pasture, sod or noncrop areas. Spray when the wirestem muhly is 8 inches or more in height. Do not till between harvest and fall applications or in the fall or spring or prior to spring applications. Allow 3 or more
Napiergrass4.5 - 7.53 - 201.5%Apply when most plants are in the early head stage.Nightshade, silverleaf33 - 101.5%Applications should be made when at least 60% of the plants have berries. Fall treatments must be applied before a killing frost.Nutsedge; purple, yellow0.75 - 4.53 - 400.75 - 1.5%Apply 4.5 pts. of this product per acre or applied a 0.75 to 1.5% solution for control of nutsedg plants and immature nutlets attached to treated plants. Treat when plants are in flowe or when new nutlets can be found at rhizome tips. Nutlets which have not germinated will not be controlled and may germinated fuller treatment. Repeat treatments will be required for long-term control of ungerminated tubers.Sequential applications: 1.5 to 3 pts. of this product in 3 to 10 gallons of water per acre will also provide control. Make applications when a majority of the plants reat in the 3- to 5-leaf stage (less than 6 inches tall). Repeat 	Mullein, common	4.5 - 7.5	3 - 20	1.5%	Apply when most plants are in the early bud
Nightshade, silverleaf33 - 101.5%Applications should be made when at least 60% of the plants have berries. Fall treatments must be applied before a killing frost.Nutsedge; purple, yellow0.75 - 4.53 - 400.75 - 1.5%Apply 4.5 pts. of this product per acre or appl a 0.75 to 1.5% solution for control of nutsedg plants and immature nutlets attached to treated plants. Treat when plants are in flowe or when new nutlets can be found at rhizome tips. Nutlets which have not germinate after treatment. Repeat treatments will be required for long-term control of ungerminate attubers.Sequential applications: 1.5 to 3 pts. of this product in 3 to 10 gallons of water per acre will also provide control. Make applications when a majority of the plants are in the 3- to 5-leaf stage (less than 6 inches tall). Repeat this application, as necessary, when newly emerging plants reach the 3- to 5-leaf stage. Subsequent applications will be necessary for long-term control.For partial control.For partial control.Sousequent applications will be necessary for long-term control.Gong-term control.For partial control.Subsequent applications will be necessary for long-term control.For partial control of existing plants, apply 12 fl. oz. to 3 pts. 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	Napiergrass	4.5 - 7.5	3 - 20	1.5%	Apply when most plants are in the early head
Nutsedge; purple, yellow         0.75 - 4.5         3 - 40         0.75 - 1.5%         Apply 4.5 pts. of this product per acre or appl a 0.75 to 1.5% solution for control of nutsedg plants and immature nutlets attached to treated plants. Treat when plants are in flowe or when new nutlets can be found at rhizome tips. Nutlets which have not germinated will not be controlled and may germinate after treatment. Repeat treatments will be required for long-term control of ungerminated tubers.           Sequential applications: 1.5 to 3 pts. of this product in 3 to 10 gallons of water per acre will also provide control. Make applications when a majority of the plants are in the 3- to 5-leaf stage (less than 6 inches tall). Repeat this application, as necessary, when newly emerging plants reach the 3- to 5-leaf stage. Subsequent applications will be necessary for long-term control.           For partial control of existing plants, apply 12 fl. oz. to 3 pts. 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		3	3 - 10	1.5%	Applications should be made when at least 60% of the plants have berries. Fall treatments must be applied before a killing
regrowth of existing plants.		0.75 - 4.5	3 - 40	0.75 – 1.5%	Apply 4.5 pts. of this product per acre or apply a 0.75 to 1.5% 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 after treatment. Repeat treatments will be required for long-term control of ungerminated tubers. Sequential applications: 1.5 to 3 pts. of this product in 3 to 10 gallons of water per acre will also provide control. Make applications when a majority of the plants are in the 3- to 5-leaf stage (less than 6 inches tall). Repeat this application, as necessary, when newly emerging plants reach the 3- to 5-leaf stage. Subsequent applications will be necessary for long-term control. For partial control of existing plants, apply 12 fl. oz. to 3 pts. 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
Orchardgrass 1.5 - 3 3 - 40 1.5% Apply 3 pts. 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	Orchardgrass	1.5 - 3	3 - 40	1.5%	Apply 3 pts. 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 pts. of this product in 3 to 10 gallons of water per acre. Apply to actively growing plants when
1.5 to 2.5 pts. of this product in 3 to 10 gallor					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
Pampasgrass – – 1.25 - 1.5% Pampasgrass should be at or beyond the boo	Pampasarass	_	_	1.25 - 1.5%	

				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	0.75 – 1.5%	For partial control. For best results, treat during late summer or fall 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. Visible control symptoms will be slow to develop.
Poison hemlock	_	-	0.75 – 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%	In annual cropping systems, or in pastures and sods followed by deep tillage: Apply 1.5 pts. of this product in 3 to 10 gallons of water per acre. For 10 to 40 gallons of water per acre, apply 3 pts. of this product. Do not tank mix with residual herbicides when using 1.5 pt. rate. Spray when quackgrass is 6 to 8 inches in height. Do not till between harvest and fall applications or in fall or spring prior to spring application. Allow 3 or more days after application before tillage. In pastures or sods, use a moldboard plow for best results. In pastures, sods or noncrop areas where deep tillage does not follow application: Apply 3 to 4.5 pts. of this product in 10 to 40 gallons of water per acre when quackgrass is greater than 8 inches tall.
Redvine	1.25 to 3	5 - 10	1.5%	For suppression, apply 18 fl. oz. of this product per acre at each of two applications 7 to 14 days apart or a single application of 3 pts. per acre. Apply specified rates in 5 to 10 gallons of water per acre. Apply in late September or early 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.
Reed, giant	-	-	1.5%	Best results are obtained when applications are made in the late summer to fall.
Ryegrass, perennial	1.5 – 4.5	3 - 40	0.75%	In annual cropping systems apply 1.5 to 3 pts. of this product per acre. Apply 1.5 pts. of this product in 3 to 10 gallons of water per acre. Use 3 pts. of this product in 10 to 40 gallons of water per acre. In noncrop, or areas where annual tillage is not practiced (no-till), apply 3 to 4.5 pts. of this product in 10 to 40 gallons of water per acre. For best results, apply when most plants have reached the boot to head stage of growth or in the fall prior to frost. Do not tank mix with residual herbicides when using 1.5 pt. 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 fl. oz. 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 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 fl. oz. 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. 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, allow at least 4 weeks for initiation of active regrowth and rosette development prior to the application of this product. Fall treatments must be applied before a killing frost. Allow 3 or more days after application before tillage.
				For suppression in spring, apply 1.5 pts. of this product, or 12 fl. oz. of this product plus 0.5 pound a.i. of 2,4-D, in 3 to 10 gallons of water per acre. 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.
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 frost.
Trumpet creeper	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 plants are in the early head stage.
Wheatgrass, western	3 - 4.5	3 - 40	1.5%	For best results, apply when most plants have reached the boot to head stage of growth.

# WOODY BRUSH AND TREES RATE TABLE

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

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

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

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

Weeds Species	Cornerstone® 5 Plus Rate (Pt/A)	Water Volume (GPA)	Hand-Held % Solution	COMMENTS
Alder	4.5 - 6	3 - 40	0.75 - 1.2%	For control
Ash	3 - 7.5	3 - 40	0.75 - 1.5%	Partial control
Aspen, quaking	3 - 4.5	3 - 40	0.75 - 1.2%	For control
Bearmat (Bearclover)	3 - 7.5	3 - 40	0.75 - 1.5%	Partial control
Beech	3 - 7.5	3 - 40	0.75 - 1.5%	Partial control
Birch	3 - 4.5	3 - 40	0.75 - 1.2%	For control
Blackberry	4.5 - 6	10 - 40	0.75 - 1.2%	For control. Make applications after plants have reached full leaf maturity. Best results are obtained when applications are made in late summer or fall. Applications may also be made after leaf drop and until a killing frost or as long as stems are green. After berries have set or dropped in late fall, blackberry can be controlled by applying a 3/4% solution of this product. For control of blackberries after leaf drop and until killing frost or as long as stems are green, apply 3 to 4 quarts of this product in 10 to 40 gallons of water per acre.
Blackgum	3 - 7.5	3 - 40	0.75 - 1.5%	For control
Bracken	3 - 7.5	3 - 40	0.75 - 1.5%	For control
Broom: French, Scotch	-	-	1.125 - 1.5%	For control
Buckwheat, California	_	_	0.75 - 1.5%	For partial control. Thorough coverage of foliage is necessary for best results.
Cascara	3 - 7.5	3 - 40	0.75 - 1.5%	Partial control
Catsclaw	-	_	0.75 - 1.2%	Partial control
Ceanothus	3 - 7.5	3 - 40	0.75 - 1.5%	Partial control

Chamise	_	_	0.75%	For control. Thorough coverage of foliage is necessary for best results.
Cherry: bitter, black, pin	3 - 4.5	3 - 40	0.75 - 1.2%	For control
Coyote brush	_	-	1.125 - 1.5%	For control. Apply when at least 50% of the new leaves are fully developed.
Dogwood	3 - 7.5	3 - 40	0.75 - 1.5%	Partial control
Elderberry	3 - 4.5	3 - 40	0.75 - 1.2%	For control
Elm	3 - 7.5	3 - 40	0.75 - 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	0.75 - 1.5%	Partial control
Gorse	3 - 7.5	3 - 40	0.75 - 1.5%	Partial control
Hazardia	_	_	0.75 - 1.5%	Partial control. Thorough coverage of foliage is necessary for best results.
Hawthorn	3 - 4.5	3 - 40	0.75 - 1.2%	For control
Hazel	3 - 4.5	3 - 40	0.75 - 1.2%	For control
Hickory	3 - 7.5	3 - 40	0.75 - 1.5%	Partial control
Honeysuckle	4.5 - 6	3 - 40	0.75 - 1.2%	For control
Hornbeam, American	3 - 7.5	3 - 40	0.75 - 1.5%	Partial control
Kudzu	6 - 7.5	3 - 40	1.5%	For control. Repeat applications may be required to maintain control.
Locust, black	3 - 6	3 - 40	0.75 - 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 or early summer treatments.
Manzanita	3 - 7.5	3 - 40	0.75 - 1.5%	Partial control
Maple, red	3 - 6	3 - 40	0.75 - 1.2%	For control, apply a 0.75 to 1.2% solution when at least 50% of the new leaves are fully developed. For partial control, apply 2 to 4 quarts of this product per acre.
Maple, sugar	_	_	0.75 - 1.2%	For control. Apply when at least 50% of the new leaves are fully developed.
Monkey flower	-	_	0.75 - 1.5%	Partial control. Thorough coverage of foliage is necessary for best results.
Oak; black, white	3 - 6	3 - 40	0.75 - 1.5%	Partial control
Oak, post	4.5 - 6	3 - 40	0.75 - 1.2%	For control
Oak; northern, pin	_	_	0.75 - 1.2%	For control. Apply when at least 50% of the new pin leaves are fully developed.
Oak, southern red	3 - 4.5	3 - 40	0.75 - 1.2%	For control
Persimmon	3 - 7.5	3 - 40	0.75 - 1.5%	Partial control
Pine	3 - 7.5	3 - 40	0.75 - 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	0.75 - 1.5%	Partial control
Redbud,	3 - 7.5	3 - 40	0.75 - 1.5%	For control

eastern				
Rose, multiflora	3	3 - 40	0.75%	For control. Treatments should be made prior to leaf deterioration by leaf-eating insects.
Russian olive	3 - 7.5	3 - 40	0.75 - 1.5%	Partial control
Sage, black	_	_	0.75%	For control. Thorough coverage of foliage is necessary for best results.
Sage, white	3 - 7.5	3 - 40	0.75 - 1.5%	Partial control
Sagebrush, California	_	-	0.75%	For control. Thorough coverage of foliage is necessary for best results.
Salmonberry	3 - 4.5	3 - 40	0.75 - 1.2%	For control
Saltcedar	3 - 7.5	3 - 40	0.75 - 1.5%	For control
Sassafras	3 - 7.5	3 - 40	0.75 - 1.5%	Partial control
Sourwood	3 - 7.5	3 - 40	0.75 - 1.5%	Partial control
Sumac; poison, smooth, winged	3 - 6	3 - 40	0.75 - 1.5%	Partial control
Sweetgum	3 - 4.5	3 - 40	0.75 - 1.2%	For control
Swordfern	3 - 7.5	3 - 40	0.75 - 1.5%	Partial control
Tallowtree, Chinese	_	-	0.75%	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 - 4.5	3 - 40	0.75 - 1.2%	For control
Tobacco, tree	_	_	0.75 - 1.5%	Partial control
Trumpet creeper	3 - 4.5	3 - 40	0.75 - 1.2%	For control
Vine maple	3 - 7.5	3 - 40	0.75 - 1.5%	Partial control
Virginia creeper	3 - 7.5	3 - 40	0.75 - 1.5%	For control
Waxmyrtle, southern	3 - 7.5	3 - 40	0.75 - 1.5%	Partial control
Willow	4.5 - 6	3 - 40	0.75 - 1.2%	For control

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