

# **HERBICIDE**

For use in certain cropping systems, including Roundup Ready® Alfalfa, Canola, Corn, Cotton, Soybeans, and Sugar Beets; For reduced tillage and fallow systems; and many noncrop areas.

#### **ACTIVE INGREDIENT:**

Glyphosate, N-(phosphonomethyl) glycine, in the form of its isopropylamine salt*	41.0%
OTHER INGREDIENTS:	59.0%
	100.0%

\*Contains 480 grams per liter or 4 pounds per U.S. gallon of the active ingredient glyphosate, in the form of its isopropylamine salt. Equivalent to 356 grams per liter or 3 pounds per U.S. gallon of the acid, glyphosate.

# KEEP OUT OF REACH OF CHILDREN CAUTION / PRECAUCIÓN

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

SEE INSIDE BOOKLET FOR FIRST AID AND ADDITIONAL PRECAUTIONARY STATEMENTS

For Chemical Spill, Leak, Fire, or Exposure, Call CHEMTREC (800) 424-9300

For Medical Emergencies Only, Call (877) 325-1840

# EPA Reg. No 228-366

Manufactured for Nufarm Americas Inc. 11901 S. Austin Avenue Alsip, IL 60803



Grow a better tomorrow.

# PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS KEEP OUT OF REACH OF CHILDREN CAUTION / PRECAUCIÓN

Causes moderate eye irritation. Harmful if swallowed or inhaled. Do not get in eyes or on clothing. Avoid breathing vapor or spray mist.

Have the product con	FIRST AID  Italiner or label with you when calling a poison control center or doctor, or going for treatment.
IF IN EYES	<ul> <li>Hold eye open and rinse slowly and gently with water for 15 to 20 minutes.</li> <li>Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.</li> <li>Call a poison control center or doctor for treatment advice.</li> </ul>
IF SWALLOWED	<ul> <li>Call poison control center or doctor immediately for treatment advice.</li> <li>Have person sip a glass of water if able to swallow.</li> <li>Do not induce vomiting unless told to do so by the poison control center or doctor.</li> <li>Do not give anything by mouth to an unconscious person.</li> </ul>
IF INHALED	<ul> <li>Move person to fresh air.</li> <li>If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible.</li> <li>Call a poison control center or doctor for further treatment advice.</li> </ul>

# PERSONAL PROTECTIVE EQUIPMENT (PPE):

Some materials that are chemical-resistant to this product are listed below. If you want more options, follow the instructions for category F on an EPA chemical-resistance category selection chart.

# Applicators and other handlers must wear:

- · Long-sleeved shirt and long pants
- Shoes plus socks

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. **DO NOT** reuse them. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

#### **Engineering Controls Statement:**

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

# **USER SAFETY RECOMMENDATIONS**

# Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
- Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into 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 disposing of equipment washwaters or rinsate.

# PHYSICAL OR CHEMICAL HAZARDS

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

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

# **DIRECTIONS FOR USE**

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

# AGRICULTURAL USE REQUIREMENTS

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

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

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is: Coveralls, chemical-resistant gloves made of any waterproof material such as barrier laminate or Viton >13, 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.

#### PRODUCT INFORMATION

Do not apply this product using aerial spray equipment except under conditions as specified within this label.

This product, a water-soluble liquid, mixes readily with water to be applied as a foliar spray for the control or elimination of most herbaceous plants. It may be applied through most standard industrial or field-type sprayers after dilution and thorough mixing with water in accordance with label instructions.

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 visual effects of control. 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.

Unless otherwise specified on this label, delay application until vegetation has emerged and reached the stages described for control of such vegetation under the "WEEDS CONTROLLED" section of this label.

Always use the higher rate of this product per acre within the specified range when (1) weed growth is heavy or dense, or (2) 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.

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

Rainfall or irrigation occurring within 6 hours after application may reduce effectiveness. Heavy rainfall or irrigation within 2 hours after application may wash the spray mixture off the foliage and a repeat treatment may be required.

This product does not provide residual weed control. For subsequent residual weed control, follow a label-approved herbicide program. Read and carefully observe the cautionary statements and all other information appearing on the labels of all herbicides used.

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

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

If application rates for grass seed, sod production, non-cultivated areas, industrial sites, pasture grass and rangeland total 3 quarts per acre or less, no waiting period between treatment and feeding or livestock grazing is required. If the rate is greater than 3 quarts per acre, remove domestic livestock before application and wait 8 weeks after application before grazing or harvesting.

#### ATTENTION

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

Do not allow the herbicide solution to mist, drip, drift or splash onto desirable vegetation since minute quantities of this product may kill, seriously injure or reduce yields of many desirable forms of vegetation including flowers, fruits, grapes, tomatoes, ornamentals, vegetables, cotton, soybeans, tobacco, beans and other desirable nontarget plants including, where applicable, target crop species not containing a glyphosate tolerant gene. Minute quantities of spray may cause severe plant response. Read and follow Spray Drift Management section of label. It is suggested to use a smoke generator or other means at or near the application site for the detection of air movement, air stability, or temperature inversions. The likelihood of injury occurring from the use of this product is greatest when winds are gusty or in excess of 5 miles per hour or when other conditions, including lesser wind velocities, will allow spray drift to occur. When spraying, avoid combinations of pressure and nozzle type that will result in splatter or fine particles (mist) which are likely to drift. AVOID APPLYING AT EXCESSIVE SPEED OR PRESSURE.

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

#### WEED RESISTANCE

Any weed population may contain plants that are naturally resistant to glyphosate, the active ingredient in this product, and to other herbicides with the same mode of action. ATTENTION: These resistant weed biotypes will not be controlled by this product. Consult advisors such as your local agricultural extension service for agronomic management practices to minimize the occurrence of glyphosate resistance and considerations for supplemental control measures.

# **Weed Management**

To minimize the occurrence of glyphosate-resistant biotypes, observe the following general weed management practices:

- Scout your fields before and after herbicide applications.
- Start with a clean field, using either a burndown herbicide application or tillage.
- Control weeds early when they are relatively small.
- Add other herbicides (e.g. a selective and/or a residual herbicide) and cultural practices (e.g. tillage or crop rotation) where appropriate.
- One method for adding other herbicides into a continuous Roundup Ready system is to rotate to other Roundup Ready crops.
- Utilize the specified label rate for the most difficult to control weed in your field. Avoid tank mixtures with other herbicides that reduce
  this product's efficacy (through antagonism), or tank mixture directions that encourage application rates of this product below the label
  directions.
- Control weed escapes and prevent weeds from setting seeds.
- Clean equipment before moving from field to field to minimize the spread of weed seed or plant parts.
- Use new commercial seed that is as free of weed seed as possible.
- Report any incidence of repeated non-performance of this product on a particular weed to your Nufarm representative, local retailer, or county extension agent.

# Management of Glyphosate-Resistant Biotypes

Since the occurrence of new glyphosate-resistant weeds cannot be determined until after product use and scientific confirmation, manufacturer is not responsible for any losses that may result from the failure of this product to control glyphosate-resistant weed biotypes.

The following good agronomic practices are recommended to reduce the spread of confirmed glyphosate-resistant biotypes:

- If a naturally occurring resistant biotype is present in your field, this product should be tank-mixed or applied sequentially with an appropriately labeled herbicide with a different mode of action to achieve control.
- Cultural and mechanical control practices (e.g. crop rotation or tillage) may also be used as appropriate.
- One method for adding other herbicides into a continuous Roundup Ready system to rotate to other Roundup Ready crops.
- Scout treated fields after herbicide applications and control escaping weeds including resistant biotypes before they set seed.
- Thoroughly clean equipment before leaving fields known to contain resistant biotypes.

# MIXING, ADDITIVES AND APPLICATION INSTRUCTIONS

APPLY THESE SPRAY SOLUTIONS IN PROPERLY MAINTAINED AND CALIBRATED EQUIPMENT CAPABLE OF DELIVERING DESIRED VOLUMES. DO NOT APPLY WHEN WIND OR OTHER CONDITIONS FAVOR DRIFT. HAND-GUN APPLICATIONS SHOULD BE PROPERLY DIRECTED TO AVOID SPRAYING DESIRABLE PLANTS.

**NOTE:** REDUCED RESULTS MAY OCCUR IF WATER CONTAINING SOIL IS USED, SUCH AS WATER FROM PONDS AND UNLINED DITCHES.

#### MIXING

Use caution to avoid siphoning back into the carrier source. Use approved anti-back-siphoning devices where required by state or local regulations. During mixing and application, foaming of the spray solution may occur. To prevent or minimize foam, avoid the use of mechanical agitators, terminate by-pass and return lines at the bottom of the tank and, if needed, use an approved anti-foam or defoaming agent.

#### **TANK MIXTURES**

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

Mix labeled tank mixtures of this product with water as follows:

Add individual formulations to the spray tank as follows: wettable powder, flowable, emulsifiable concentrate, drift control additive, water soluble liquid followed by surfactant.

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

Carefully select proper nozzle to avoid spraying a fine mist. For best results with conventional ground application equipment, use flat fan nozzles.

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

#### MIXING FOR HAND-HELD SPRAYERS

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

DESIRED	AMOUNT OF RAZOR HERBICIDE							
VOLUME	1/2%	1%	1-1/2%	2%	5%	10%		
1 Gal.	2/3 fluid ounce	1-1/3 fluid ounces	2 fluid ounces	2-2/3 fluid ounces	6-1/2 fluid ounces	13 fluid ounces		
25 Gal.	1 pint	1 quart	1-1/2 quart	2 quarts	5 quarts	10 quarts		
100 Gal.	2 quarts	1 gallon	1-1/2 gallons	2 gallons	5 gallons	10 gallons		

2 tablespoons = 1 fluid ounce

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

# **ADDITIVES** SURFACTANTS

Nonionic surfactants which are labeled for use with herbicides may be used. Do not reduce rates of this product when adding surfactant. When adding additional surfactants follow manufacturers rates and instructions for use of the surfactant. Read and carefully observe surfactant cautionary statements and other information appearing on the surfactant label.

# **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, and this product plus 2,4-D, Dicamba (such as Clash or Banvel) or residual herbicide tank mixtures on annual and perennial weeds. The improvement in performance may be apparent where environmental stress is a concern. If ammonium sulfate is added directly to the spray tank, add slowly with agitation. Adding too quickly may clog outlet line. Ensure that ammonium sulfate is completely dissolved in the spray tank before adding herbicides or surfactant. Thoroughly rinse the spray system with clean water after use to reduce corrosion.

NOTE: The use of ammonium sulfate as an additive does not preclude the need for additional surfactant. When using ammonium sulfate, apply this product at rates specified on 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 instructions.

# **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

**Broadcast Spray** 

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

**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 the spray onto weed foliage. \*This product is not registered in California or Arizona for use in mistblowers.

**Selective equipment** - Recirculating sprayers, shielded sprayers, hooded sprayers and wiper applicators. See the appropriate part of this section for specific instructions and rates of application.

#### **AERIAL EQUIPMENT**

Use the specified rates of this herbicide in sufficient volume of water to insure thorough coverage unless otherwise specified in this label. See the "WEEDS CONTROLLED" section of this label for specific use rates. Unless otherwise specified, do not exceed 1 quart per acre. Aerial applications of this product may be made in annual cropping conventional tillage systems, fallow and reduced tillage systems, Roundup Ready crops, and preharvest applications. Refer to the individual use area sections of this label for specified volumes and application rates. FOR AERIAL APPLICATION IN CALIFORNIA, see below.

Avoid direct application to any body of water.

AVOID DRIFT - DO NOT APPLY DURING LOW-LEVEL INVERSION CONDITIONS, 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.

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

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

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

Thoroughly wash aircraft, especially landing gear, after each day of spraying to remove residues of this product accumulated during spraying or from spills. PROLONGED EXPOSURE OF THIS PRODUCT TO UNCOATED STEEL SURFACES MAY RESULT IN CORROSION AND POSSIBLE FAILURE OF THE PART. LANDING GEAR ARE MOST SUSCEPTIBLE. The maintenance of an organic coating (paint), which meets aerospace specification MIL-C-38413, may be used to prevent corrosion.

This product plus Spyder® (Sulfometuron methyl), Diablo® (Dicamba) or 2,4-D tank mixtures may not be applied by air in California.

# **SPRAY DRIFT MANAGEMENT**

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. 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 must be observed.

# Importance of Droplet Size

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

#### **Controlling Droplet Size**

Volume-Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher rated flows produce larger droplets. Pressure-Use the lower spray pressures specified 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 should be avoided below 2 mph due to variable wind direction and high inversion potential. Note: Local terrain can influence wind patterns. Every applicator should be familiar with local wind patterns and how they affect drift.

# **Temperature And Humidity**

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

# **Temperature Inversions**

Applications 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 temperatures with altitude and are common on nights with limited cloud cover and light to no wind. They begin to form as the sun set 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 moves 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

EXTREME CARE MUST BE EXERCISED TO AVOID CONTACT OF SPRAY WITH FOLIAGE, GREEN STEMS, OR FRUIT OF DESIRABLE CROPS, PLANTS, TREES, OR OTHER DESIRABLE VEGETATION SINCE SEVERE DAMAGE OR DESTRUCTION MAY RESULT.

# **Non-Cultivated Areas**

When applied as directed and under the conditions described in the "Weeds Controlled" section of the label booklet for this product, this herbicide will control or partially control the labeled weeds growing in the following areas: airfields; airports; alleys, lanes, trails & access roads; around commercial or industrial structures or outbuildings; around farm and ranch structures and outbuildings; around ornamental gardens; around ornamental trees & shrubs; bare ground; beaches; campgrounds; construction sites; ditch banks; drive-in theaters; driveways & ramps; dry ditches & canals; fences & fencerows; firebreaks; golf courses; gravel yards; habitat restoration & management areas; highways & roadsides (including aprons, medians, guardrails & right of ways); industrial plant sites; industrial areas; lumber yards; mulched areas; natural areas; paths and trails; parking areas; parks; paved areas; petroleum & other tank farms; pumping installations; pipeline, power, telephone & utility rights-of-way; power stations; preplant to turf & ornamental plants; railroad rights-of way; recreation areas; refineries; resorts; schools; sidewalks; sports areas; storage areas; substations; tennis courts; uncropped farmstead areas; uncultivated non-agricultural areas; vacant lots; walkways; wastelands; & wildlife habitat areas.

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

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

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

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

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

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

Thoroughly wash aircraft, especially landing gear, after each day of spraying to remove residues of this product accumulated during spraying or from spills. PROLONGED EXPOSURE OF THIS PRODUCT TO UNCOATED STEEL SURFACES MAY RESULT IN CORROSION AND POSSIBLE FAILURE OF THE PART. LANDING GEAR IS MOST SUSCEPTIBLE. The maintenance of an organic coating (paint) which meets aerospace specification MIL-C-38413 may prevent corrosion.

# FOR AERIAL APPLICATION IN FRESNO COUNTY, CALIFORNIA ONLY

From February 15 through March 31 only. For aerial application outside of these dates, refer to the "FOR AERIAL APPLICATION IN CALIFORNIA ONLY" section printed above.

#### APPLICABLE AREA

This section of the label only applies to the area contained inside the following boundaries within Fresno County, California only.

North: Fresno County line
South: Fresno County line
East: State Highway 99
West: Fresno County line
PRODUCT INFORMATION

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

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

#### WRITTEN DIRECTIONS

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

# **AERIAL APPLICATOR TRAINING AND EQUIPMENT**

Aerial application of this herbicide 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 insure that proper rates of herbicides and adjuvants are being applied during commercial use. Applicator must document such calibrations and testing. Demonstration of performance at Fresno County Agricultural Commissioner approved "fly-ins" constitutes such documentation, or other written records showing calculations and measurements of flight and spray parameters acceptable to the Fresno County Agricultural Commissioner.

Application 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.

To report known or suspected misuse of this product or for additional information on the proper aerial application of this product, call 1-800-345-3330.

Read the "WARRANTY" section in this label booklet before using this product.

# **BROADCAST EQUIPMENT**

For control of annual or perennial weeds listed on this label using broadcast equipment - Use the specified rates of this product per acre as a broadcast spray unless otherwise specified on this label. See the "WEEDS CONTROLLED" section of this label for specific rates.

# **CONTROLLED DROPLET APPLICATION (CDA)**

Apply these spray solutions in properly maintained and calibrated equipment capable of delivering desired volumes.

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] or [in a sufficient volume of water to assure thorough coverage.]

For the control of labeled annual weeds with hand-held CDA units, apply a 20 percent solution. For the control of labeled perennial weeds, apply a 20 to 40 percent solution of this product.

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

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

Use Coarse Sprays Only

Mix this product in clean water and 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 spray to the point of runoff.

For control of annual weeds listed on this label, apply a 0.5 percent solution of this product plus nonionic surfactant 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 agricultural uses, allow 3 or more days before tillage or mowing.

For annual weeds over 6 inches tall, or when not using additional surfactant, or unless otherwise specified, use a 1 percent solution. For best results, use a 2 percent solution on harder-to-control [perennials, such as Bermudagrass, Dock, Field bindweed, Hemp dogbane, Milkweed and Canada thistle.] or [weeds.]

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

See the "MIXING FOR HAND-HELD SPRAYERS" section of this label for specific rates.

#### SELECTIVE EQUIPMENT

This product may be applied through a recirculating spray system, shielded and hooded applicators, or wiper applicators after dilution and thorough mixing with water to listed weeds growing in any non-cultivated site specified on this label and only when specifically instructed in cropping systems.

#### AVOID CONTACT WITH DESIRABLE VEGETATION

Contact of the herbicide solution with the desirable vegetation may result in damage or destruction. Applicators used above desired vegetation should be adjusted so that the lowest spray stream or wiper contact point is at least 2 inches above the desirable vegetation. Droplets, mist, foam, or splatter of the herbicide solution settling on desirable vegetation 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 the height of the weeds varies so that not all weeds are contacted. In these instances, repeat treatment may be necessary.

#### SHIELDED AND HOODED APPLICATORS

When applied as directed under conditions described for shielded applicators, this product will control those weeds listed in the "WEEDS CONTROLLED" section of this label. Use the following equation to convert from a broadcast rate per acre to a band rate per acre.

 Band width in inches
 X
 Herbicide Broadcast RATE per acre
 =
 Herbicide Band RATE per acre

 Band width in Inches
 X
 Broadcast VOLUME of solution per acre
 =
 Band VOLUME of solution per acre

Use nozzles that provide uniform coverage within the treated area. Keep shields on shielded sprayers adjusted to protect desirable vegetation. EXTREME CARE MUST BE EXERCISED TO AVOID CONTACT WITH DESIRABLE VEGETATION.

A hooded sprayer is a type of shielded applicator. The spray pattern is completely enclosed on the top and all 4 sides by a hood, thereby shielding the crop from the spray solution. This equipment must be set up and operated in a manner that avoids bouncing or raising the hoods off the ground in any way. If the hoods are raised, spray particles may escape and come into contact with the crop, causing damage or destruction of the crop. The spray hoods must be operated on the ground or skimming across the ground. Tractor speed must be adjusted to avoid bouncing of the spray hoods. Avoid operation on rough or sloping ground where the spray hoods might be raised off the ground.

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

# **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 wiper applications.

For Rope or Sponge Wick-Applicators - Mix 1 gallon of this product in 2 gallons of water to prepare a 33 percent solution. Apply this solution to weeds listed in this "WIPER APPLICATORS" section.

For Porous-Plastic Applicators - Solutions ranging from 33 to 100 percent of this product in water may be used in porous-plastic wiper applicators.

When applied as directed under the conditions described for "WIPER APPLICATORS", this product CONTROLS the following weeds.

# **ANNUAL GRASSES**

Corn; Panicum, Texas; Rye, common; Shattercane

#### **ANNUAL BROADLEAVES**

Sicklepod; Spanishneedles; Starbur, bristly

When applied as directed under the conditions described for "WIPER APPLICATORS", this product SUPPRESSES the following weeds:

#### ANNUAL BROADLEAVES

Beggarweed, Florida; Dogfennel; Pigweed, redroot; Ragweed, common; Ragweed, giant; Sunflower; Thistle, musk: Velvetleaf

#### PERENNIAL GRASSES

Bermudagrass; Guineagrass; Johnsongrass; Smutgrass; Vaseygrass

#### PERENNIAL BROADLEAVES

Dogbane, hemp; Milkweed; Nightshade, silverleaf; Thistle, Canada

# WEEDS CONTROLLED

This herbicide controls many annual and perennial grasses and broadleaf weeds.

#### **ANNUAL WEEDS**

- Apply to actively growing grass and broadleaf weeds.
- Allow at least 3 days after treatment before tillage.
- For maximum agronomic benefit, apply when weeds are 6 inches or less in height.
- To prevent seed production, applications should be made prior to seedhead formation.
- This product does not provide residual control; therefore, delay application until maximum weed emergence. Repeat treatments may be necessary to control later germinating weeds.

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

When applied as directed under the conditions described, this product will control the weeds listed below when:

- 1. Use a water carrier volume of 3 to 10 gallons per acre for ground applications and 3 to 5 gallons per acre for aerial applications. (See the "AERIAL APPLICATION" section of this label for approved sites.)
- 2. A nonionic surfactant is added at 0.5 to 1 percent by total spray volume. Use 0.5 percent surfactant concentration when using surfactants which contain at least 70 percent active ingredient or a 1 percent surfactant concentration for those surfactants continuing less than 70 percent active ingredient.

#### NOTE

- The addition of 2 percent dry ammonium sulfate by weight or 17 pounds per 100 gallons of water may increase the performance of this product on annual weeds. The improvement in performance may be apparent where environmental stress is a concern. Refer to the "MIXING, ADDITIVES and APPLICATION INSTRUCTIONS" section of this label.
- 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.
- Refer to the "TANK MIXTURES" portion of this section for control of additional broadleaf weeds.

WEED SPECIES	MAXIMUM HEIGHT/LENGTH	RATE PER ACRE* (Fluid Ounces)
Foxtail Setaria spp.	12"	8
Barnyardgrass Echinochloa crus-galli Bluegrass, annual Poa annua Brome, downy** Bromus tectorum Mustard, blue Chorispora tenella Mustard, tansy Descurainia pinnata Mustard, tumble Sisymbrium altissimum Mustard, wild Sinapis arvensis Spurry, umbrella Holosteum umbellatum	6" (0 to 4" (4 to 6"	12 16 <sup>1</sup> ) 24 <sup>1</sup> )

(continued)

WEED	MAXIMUM HEIGHT (FRIGHT)	RATE PER ACRE*
SPECIES	HEIGHT/LENGTH	(Fluid Ounces)
Barley Hordeum vulgare Rye Secale cereale Shattercane	12"	12 16 <sup>1</sup> ) 24 <sup>1</sup> )
Sorghum bicolor Stinkgrass Eragrostis cilianensis		
Wheat Triticum aestivum	18"	
Morningglory Ipomoea spp. Sicklepod Cassia obtusifolia	2"	16
Bluegrass, bulbous Poa bulbosa Cheat Bromus secalinus Chickweed, common Stellaria media Chickweed, mouseear Cerastium vulgatum Corn Zea mays Goatgrass, jointed Aegilops cylindrica Groundsel, common Senecio vulgaris Henbit Lamium amplexicaule Horseweed/Marestail Conyza canadensis Lambsquarters, common Chenopodium album Pennycress, field Fanweed Thlaspi arvense Rocket, London Sisymbrium irio Ryegrass, Italian Lolium multiflorum Shepherdspurse Capsella bursa-pastoris Spurge, annual Euphorbia spp.  Buttercup Ranunculus spp. Cocklebur Xanthium strumarium Crabgrass Digitaria spp.	12"	
Dwarf dandelion  Krigia cespitosa		

(continued)

WEED SPECIES	MAXIMUM HEIGHT/LENGTH	RATE PER ACRE* (Fluid Ounces)
Falseflax, smallseed Camelina microcarpa Foxtail, Carolina Alopecurus carolinianus Johnsongrass, seedling Sorghum halepense Oats, wild Avena fatua Panicum, fall Panicum dichotomiflorum Panicum, Texas Panicum texanum Pigweed, redroot Amaranthus retroflexus Pigweed, smooth Amaranthus hybridus Witchgrass Panicum capillare	12"	16
Sicklepod Cassia obtusifolia	3 to 4"	24
Signalgrass, broadleaf Brachiaria platyphylla	4"	
Horseweed/Marestail Conyza canadensis Lambsquarters, common Chenopodium album Spurge, annual Euphorbia spp.	7 to 12"	
Rice, red Oryza sativa Teaweed Sida spinosa	4"	32
Sprangletop Leptochloa spp.	6"	
Geranium, Carolina Geranium carolinianum Goosegrass Eleusine indica Primrose, cutleaf evening Oenothera laciniate Pusley, Florida Richardia scabra	12"	
Sicklepod Cassia obtusifolia Spanishneedles Bidens bipinnata	5 to 12"	
Filaree Erodium spp. Sprangletop Leptochloa spp.	12"	48

<sup>&</sup>lt;sup>1</sup>Use these rates to control barnyardgrass in Alabama, Arkansas, Mississippi, Missouri, Louisiana and Texas for preplant treatments. \*For those rates less than 32 fluid ounces per acre, this product at rates up to 32 fluid ounces per acre may be used where heavy weed densities exist.

<sup>\*\*</sup>For control in no-till systems, use 16 fluid ounces per acre.

#### **TANK MIXTURES**

RAZOR HERBICIDE plus DICAMBA plus NONIONIC SURFACTANT **RAZOR HERBICIDE** plus 2,4-D plus NONIONIC SURFACTANT

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

These tank mixtures are for use in fallow and reduced tillage areas only. Follow use directions as given in the "LOW-VOLUME BROADCAST APPLICATION" section.

This product plus DICAMBA or 2,4-D will control the annual grasses and broadleaf weeds listed for this product alone at the indicated heights (except 8 fluid ounces per acre applications), plus the following broadleaf weeds. For those weeds previously listed at 8 fluid ounces of this product alone per acre, use 12 fluid ounces in these tank mixtures.

NOTE: Refer to the specific product labels for crop rotation restrictions and precautionary statements of all products used in tank mixtures. Some crop injury may occur if Banvel or Dicamba is applied within 45 days of planting. The addition of Dicamba in a mixture with this product may provide short-term residual control of selected weed species.

Apply 12 to 16 fluid ounces of this product plus 0.25 pound a.i. of Dicamba or 0.5 pound a.i. of 2,4-D, plus 0.5 to 1 percent nonionic surfactant by total spray volume per acre to control dense populations of the following annual broadleaf weeds when less than the height indicated:

Cocklebur (12") Lettuce, prickly (6") Xanthium strumarium Lactuca serriola Kochia\* (6") Kochia scoparia

Marestail/Horseweed (6") Conyza canadensis

Pigweed, smooth (12") Morningglory (6") Ipomoea spp. Amaranthus hybridus Pigweed, redroot (12") Thistle, Russian (12")

Amaranthus retroflexus Salsola kali

Lambsquarters (12") Chenopodium album

\*Controlled with Dicamba tank mixture only.

Apply 16 fluid ounces of this product plus 0.5 pound a.i. of 2,4-D, plus 0.5 to 1 percent nonionic surfactant by total spray volume per acre to control the following annual broadleaf weeds when less than 6 inches in height.

Ragweed, common Ambrosia artemisiifolia Ragweed, giant Ambrosia trifida Smartweed, Pennsylvania Polygonum pensylvanicum Velvetleaf Abutilon theophrasti

**HIGH-VOLUME BROADCAST APPLICATIONS** 

When applied as directed under the conditions described, this product will control the weeds listed below when water carrier volumes are 10 gallons or more for sufficient coverage

Apply 1 to 1.5 guarts of this product per acre plus additional surfactant according to the manufacturers rates and specifications for use of the surfactant. Use 1 quart per acre if weeds are less than 6 inches tall and 1.5 quarts per acre if weeds are over 6 inches tall. If weeds have been mowed, grazed or cut, allow adequate time for new growth to reach specified stages prior to treatment. These rates will also provide control of weeds listed in the "LOW-VOLUME BROADCAST APPLICATION" section.

Balsamapple\*; Bassia, fivehook; Brome; Fiddleneck; Fleabane, hairy; Fleabane; Kochia; Lettuce, prickly; Panicum; Ragweed; common; Ragweed, giant; Smartweed; Pennsylvania; Sowthistle, annual; Sunflower; Thistle, Russian; Velvetleaf

# **PERENNIAL WEEDS**

Apply this product as follows to control or destroy most perennial weeds:

When applied as directed under the conditions described, this product WILL CONTROL the following PERENNIAL WEEDS:

Alfalfa Medicago sativa Alligatorweed\*

Alternanthera philoxeroides

Anise (fennel) Foeniculum vulgare Artichoke, Jerusalem Helianthus tuberosus **Bahiagrass** 

Paspalum notatum Bentgrass\*

Agrostis spp.

Cvnodon dactvlon Bermudagrass, water (knotgrass)\*\* Paspalum distichum

Bindweed, field Convolvulus arvensis Bluegrass, Kentucky Poa spp.

Blueweed, Texas Helianthus ciliaris **Brackenfern** Pteridium aquilinum

**Bermudagrass** 

Bromegrass, smooth Bromus inermis Bursage, woollyleaf Franseria tomentosa Canarygrass, reed Phalaris arundinacea Cattail

Typha spp. Clover, red Trifolium pratense Clover, white Trifolium repens

(continued)

<sup>\*</sup>Apply with hand-held equipment only.

# PERENNIAL WEEDS (continued)

Cogongrass

Imperata cylindrica

**Dallisgrass** 

Paspalum dilatatum

Dandelion

Taraxacum officinale

Dock, curly Rumex crispus

Dogbane, hemp Apocynum cannabinum

**Fescues** 

Festuca spp.

Fescue, tall

Festuca arundinacea

Guineagrass

Panicum maximum

Horsenettle

Solanum carolinense

Horseradish

Armoracia rusticana

Ice plant

Mesembryanthemum crystallinum

**Johnsongrass** 

Sorghum halepense

**Kikuyugrass** 

Pennisetum clandestinum

Knapweed

Centaurea repens

Lantana

Lantana camara

\*Partial Control

Lespedeza Lespedeza spp.

Milkweed

Asclepias spp. Muhly, wirestem

Muhlenbergia frondonsa

Mullein, common

Verbascum thapsus

**Napiergrass** 

Pennisetum purpureum Nightshade, silverleaf Solanum elaeagnifolium

Nutsedge; purple, yellow

Cyperus rotundus

Cyperus esculentus **Orchardgrass** 

Dactylis glomerata

**Pampasgrass** 

Cortaderia spp.

**Paragrass** 

Brachiaria mutica

Phragmites\*

Phragmites spp.

Poison hemlock Conium maculatum

Quackgrass

Agropyron repens

Redvine\*

Brunnichia ovata

Reed, giant

Arundo donax

Ryegrass, perennial

Lolium perenne

Smartweed, swamp

Polygonum coccineum

Spurge, leafy\*

Euphorbia esula

Starthistle, yellow

Centaurea solstitalis

Sweet potato, wild\* Ipomoea pandurata

Thistle, Canada

Cirsium arvense

Thistle, artichoke

Cynara cardunculus

**Timothy** 

Phleum pratense

Torpedograss\*

Panicum repens

Trumpetcreeper

Campsis radicans

Vaseygrass

Paspalum urvillei

Velvetgrass

Holcus spp.

Wheatgrass, western

Agropyron smithii

\*\*This product is not registered in California for use on water Bermudagrass.

See "DIRECTIONS FOR USE" and "MIXING, ADDITIVES and APPLICATION INSTRUCTIONS" sections of this label for labeled uses and specific application instructions.

Alfalfa - Apply 1 quart of this product per acre plus 0.5 to 1 percent nonionic surfactant by total spray volume in 3 to 10 gallons of water per acre. Make application after the last hay cutting in the fall. Allow alfalfa to regrow to a height of 6 to 8 inches or more prior to treatment. Applications should be followed with deep tillage at least 7 days after treatment, but before soil freeze-up.

Alligatorweed - Apply 4 quarts of this product per acre or apply a 1.5 percent solution with hand-held equipment to provide partial control. Apply when most of the plants are in bloom. Repeat applications will be required to maintain such control.

Anise (fennel)/Poison hemlock - Apply a 1 to 2 percent solution of this product as a spray-to-wet treatment. Optimum results are obtained when plants are treated at the bud to full-bloom stage of growth. Repeat applications may be needed in succeeding years to control plants arising from seeds.

Bentgrass - For suppression in grass seed production areas. For ground applications only, apply 1.5 guarts of this product plus 0.5 to 1 percent nonionic surfactant by total spray volume in 10 to 20 gallons of water per acre. Ensure entire crown area has resumed growth prior to a fall application. Bentgrass should be actively growing and have at least 3 inches of growth. Tillage prior to treatment should be avoided. Tillage 7 to 10 days after application for best results. Failure to use tillage after treatment may result in unacceptable control.

Bermudagrass - For control, apply 5 quarts of this product per acre. For partial control, apply 3 quarts per acre. Treat when Bermudagrass is actively growing and seedheads are present. Retreatment may be necessary to maintain control. Allow 7 or more days after application before tillage.

Bermudagrass, water (knotgrass) - Apply 1.5 quarts of this product plus 0.5 to 1 percent nonionic surfactant by total spray volume in 5 to 10 gallons of water per acre. Apply when water Bermudagrass is actively growing and 12 to 18 inches in length. Allow 7 or more days before tilling, flushing or flooding the field. This product is not registered in California for use on water Bermudagrass.

Fall applications only - Apply 1 quart of this product plus 0.5 to 1 percent nonionic surfactant by total spray volume 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 actively growing and 12 to 18 inches in length. Allow 7 or more days before tillage.

**Bindweed, field** - For control, apply 4 to 5 quarts of this product per acre west of the Mississippi River and 3 to 4 quarts east of the Mississippi River. Apply when the weeds are actively growing and are at or beyond full bloom. Do not treat when weed is under drought stress as good soil moisture is necessary for active growth. For best results, apply in late summer or fall. Fall treatments must be applied before a killing frost. Allow 7 or more days after application before tillage.

Also for control, apply 2 quarts of this product plus 0.5 pound a.i. of Dicamba in 10 to 20 gallons of water per acre. At these rates, apply using ground application only.

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

For suppression on irrigated agricultural land, apply 1 to 2 quarts 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 16 fluid ounces of this product plus 0.5 pound a.i. of 2,4-D plus 0.5 to 1 percent nonionic surfactant by total spray volume in 3 to 10 gallons of water per acre for ground applications and 3 to 5 gallons of water per acre for aerial applications.

Applications should be delayed until maximum emergence has occurred and when vines are between 6 to 18 inches in length.

**In California only,** apply 1 to 5 quarts of this product per acre. Actual rate needed for suppression or control will vary within this range depending on local conditions. For suppression on irrigated land where annual tillage is performed, apply 1 quart of this product plus 0.5 to 1 percent nonionic surfactant by total spray volume in 3 to 10 gallons of water per acre. Apply to actively growing bindweed that has reached a length of 12 inches or greater. Allow maximum weed emergence and runner growth. Do not treat when weeds are under drought stress as good soil moisture is necessary for active growth. Allow 3 or more days after application before tillage.

**Bluegrass, Kentucky/Bromegrass, smooth/Orchardgrass -** Apply 2 quarts of this product in 10 to 40 gallons of water per acre when the grasses are actively growing and most plants have reached boot-to-early seedhead stage of development. For partial control in pasture or hay crop renovation, apply 1 to 1.5 quarts of this product plus 0.5 to 1 percent nonionic surfactant by total spray volume in 3 to 10 gallons of water per acre. Apply to actively growing plants when most have reached 4 to 12 inches in height. Allow 7 or more days after application before tillage.

Orchardgrass (sods going to no-till corn) - Apply 1 to 1.5 quarts of this product per acre plus 0.5 to 1 percent nonionic surfactant by total spray volume in 3 to 10 gallons of water per acre. Apply to orchardgrass that is a minimum of 12 inches tall for spring applications and 6 inches tall for fall applications. Allow at least 3 days following application before planting. A sequential application of atrazine will be necessary for optimum results.

**Blueweed, Texas** - Apply 4 to 5 quarts of this product per acre west of the Mississippi River and 3 to 4 quarts per acre east of the Mississippi River. Apply when weed is actively growing and is at or beyond full bloom. Do not treat when weed is under drought stress as good soil moisture is necessary for active growth. New leaf development indicates active growth. For best results, apply in late summer or fall. Fall treatments must be applied before a killing frost. Allow 7 or more days after application before tillage.

**Brackenfern -** Apply 3 to 4 quarts of this product per acre as a broadcast spray or as a 1 to 1.5 percent solution with hand-held equipment. Apply to fully expanded fronds which are at least 18 inches long.

**Bursage, woollyleaf** - For control, apply 2 quarts of this product plus 1 pint of Dicamba per acre. For partial control, apply 1 quart of this product plus 1 pint of Dicamba per acre. Add 0.5 to 1 percent nonionic surfactant by total spray volume and apply in 3 to 20 gallons of water per acre. Apply when plants are producing new active growth which has been initiated by moisture for at least 2 weeks and when plants are at or beyond flowering.

Canarygrass, reed/Timothy / Wheatgrass, western - Apply 2 to 3 quarts of this product per acre. For best results, apply to actively growing plants when most have reached the boot-to-head stage of growth. Allow 7 or more days after application before tillage.

Cogongrass - Apply 3 to 5 quarts of this product plus 0.5 to 1 percent nonionic surfactant in 10 to 40 gallons of water per acre. Apply when Cogongrass is at least 18 inches tall and actively growing in late summer or fall. Allow 7 or more days after application before tillage or mowing. Due to uneven stages of growth and the dense nature of vegetation preventing good spray coverage, repeat treatments may be necessary to maintain control.

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

Also for control, apply 16 fluid ounces of this product plus 0.5 pound a.i. 2,4-D plus 0.5 to 1 percent nonionic surfactant by total spray volume in 3 to 10 gallons of water per acre.

**Dogbane, hemp** - Apply 4 quarts of this product per acre. Apply when actively growing and when most weeds 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. Allow 7 or more days after application before tillage.

For suppression, apply 16 fluid ounces of this product plus 0.5 pound a.i. of 2,4-D plus 0.5 to 1 percent nonionic surfactant by total spray volume in 3 to 10 gallons of water per acre for ground applications and 3 to 5 gallons of water per acre for aerial applications. Delay applications until maximum emergence of dogbane has occurred.

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

Fall applications only - Apply 1 quart of this product plus 0.5 to 1 percent nonionic surfactant by total spray volume in 3 to 10 gallons of water per acre. Apply to fescue in the fall when actively growing and plants have 6 to 12 inches of new growth. Allow 7 or more days after application before tillage. A sequential application of 1 pint per acre of this product plus nonionic surfactant will improve long-term control and control seedlings germinating after fall treatments or the following spring.

**Guineagrass -** Apply 3 quarts of this product per acre or use a 1 percent solution with hand-held equipment. Apply to actively growing guineagrass when most has reached at least the 7-leaf stage of growth. Ensure thorough coverage when using hand-held equipment. Allow 7 or more days after application before tillage.

Johnsongrass/Ryegrass, perennial - Apply 1 to 3 quarts of this product per acre. In annual cropping systems apply 1 to 2 quarts of this product per acre. Apply 1 quart of this product plus 0.5 to 1 percent nonionic surfactant by total spray volume in 3 to 10 gallons of water per acre. Use 2 quarts of this product when applying 10 to 40 gallons of water per acre. In non-cultivated, or areas where annual tillage (no-till) is not performed, apply 2 to 3 quarts of this product in 10 to 40 gallons of water per acre. For best results, apply to actively growing plants when most have reached the boot-to-head stage of growth or in the fall prior to frost. Allow 7 or more days after application before tillage. Do not tank-mix with residual herbicides when using the 1 quart per acre rate.

For burndown of Johnsongrass, apply 1 pint per acre plus 0.5 to 1 percent nonionic surfactant in 3 to 10 gallons of water per acre before the plants reach a height of 12 inches. For this use, allow at least 3 days after treatment before tillage.

Spot treatment (partial control or suppression) - Apply a 1 percent solution of this product plus 0.5 to 1 percent nonionic surfactant by total spray volume when Johnsongrass is 12 to 18 inches in height. Coverage should be uniform and complete.

Kikuyugrass - Apply 2 to 3 quarts of this product per acre. Spray when most kikuyugrass is at least 8 inches in height (3 or 4-leaf stage of growth) and actively growing. Allow 3 or more days after application before tillage.

**Knapweed/Horseradish** - Apply 4 quarts of this product per acre. Apply when actively growing and when most weeds 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. Allow 7 or more days after application before tillage.

**Lantana** - Apply this product as a 1 to 1.25 percent solution using hand-held equipment only. Apply to actively growing lantana at or beyond the bloom stage of growth. Use the higher application rate for plants that have reached the woody stage of growth. Allow 7 or more days after application before tillage.

**Milkweed, common** - Apply 3 quarts of this product per acre. Apply when actively growing and most of the milk-weed has reached the late bud to flower stage of growth. Following small grain harvest or mowing, allow milkweed to regrow to a mature stage prior to treatment. Allow 7 or more days after application before tillage.

**Muhly, wirestem -** Apply 1 to 2 quarts of this product per acre. Use 1 quart of this product plus 0.5 to 1 percent nonionic surfactant by total spray volume in 3 to 10 gallons of water per acre. Use 2 quarts of this product when applying 10 to 40 gallons of water per acre or in pasture, sod, or non-cultivated areas. Spray when the wirestem muhly is 8 inches or more in height and actively growing. Do not till between harvest and fall applications or in the fall or spring prior to spring applications. Allow 3 or more days after application before tillage. This product will not provide residual control of wirestem muhly from seeds which germinate after application of this product. Do not tank mix with residual herbicides when using the 1 quart per acre rate.

**Nightshade, silverleaf -** For control, apply 2 quarts of this product plus 0.5 to 1 percent nonionic surfactant by total spray volume in 3 to 10 gallons of water per acre. Applications should be made when at least 60 percent of the plants have berries. Fall treatments must be applied before a killing frost. Allow 7 or more days after application before tillage. Do not treat when weed is under drought stress as good soil moisture is necessary for active growth.

**Nutsedge**; **purple**, **yellow** - Apply 3 quarts of this product per acre as a broadcast spray, or apply a 1 to 2 percent solution from handheld equipment to control existing nutsedge plants and immature nutlets attached to treated plants. Treat when plants are in flower or when new nutlets can be found at rhizome tips. Nutlets which have not germinated will not be controlled and may germinate following treatment. Repeat treatments will be required for long-term control of ungerminated tubers.

Sequential applications of 1 to 2 quarts of this product plus 0.5 to 1 percent nonionic surfactant by total spray volume in 3 to 10 gallons of water per acre will 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 suppression to partial control of existing plants, apply 1 pint to 2 quarts of this product per acre, plus 0.5 to 1 percent nonionic surfactant in 3 to 40 gallons of water per acre. Treat when plants have 3 to 5 leaves and most are less than 6 inches tall. Repeat treatments will be required to control subsequent emerging plants or regrowth of existing plants. Wait 7 days after treatment before tillage or mowing.

**Pampasgrass/Ice plant -** Apply this product as a 1.5 to 2 percent solution using hand-held equipment. Apply to plants that are actively growing. Pampasgrass should be at or beyond the boot stage of growth. Thorough coverage is necessary for best control.

**Phragmites** - For partial control of phragmites in Florida and the counties of other states bordering the Gulf of Mexico, apply 5 quarts per acre as a broadcast spray or apply a 2 percent solution from hand-held equipment. In other areas of the U.S., apply 3 quarts per acre as a broadcast spray or apply a 1 percent solution from hand-held equipment for partial control. For best results, treat during late summer or fall months or when plants are actively growing and in full bloom. Treatment before or after this stage may lead to reduced control. Due to the dense nature of the vegetation, which may prevent good spray coverage or uneven stages of growth, repeat treatments may be necessary to maintain control. Visual control symptoms will be slow to develop.

Quackgrass - In Annual Cropping Systems, or in Pastures and Sods Followed by Deep Tillage: Apply 1 to 2 quarts of this product per acre. For the 1 quart rate, apply 0.5 to 1 percent nonionic surfactant by total spray volume in 3 to 10 gallons of water per acre. For the 2 quart rate, apply in 10 to 40 gallons of water per acre. Do not tank mix with residual herbicides when using the 1 quart rate. Spray when quackgrass is 6 to 8 inches in height and actively growing. 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, for best results use a moldboard plow.

Quackgrass - Pasture or Sod or Other Non-cultivated Areas Where Deep Tillage is Not Planned Following Application: Apply 2 to 3 quarts in 10 to 40 gallons of water per acre. Spray when the quackgrass is greater than 8 inches tall and actively growing. Do not till between harvest and fall application or in fall or spring prior to spring application. Allow 3 or more days after application before tillage.

**Redvine** - For suppression, apply 24 fluid ounces of this product per acre at each of two applications 7 to 14 days apart or a single application of 2 quarts per acre. Apply specified rates in 5 to 10 gallons of water per acre plus 0.5 to 1 percent nonionic surfactant by total volume. Apply in late September or early October to actively growing plants, which are at least 18 inches tall and have been growing 45 to 60 days since the last tillage operation. Make applications at least 1 week before a killing frost.

Reed, giant - For control of giant reed, apply a 2 percent solution of this product when plants are actively growing. Best results are obtained when applications are made in late summer to fall.

**Smartweed, swamp** - Apply 3 to 5 quarts of this product per acre when plants are actively growing and most have reached the early bud stage of growth. Allow 7 or more days after application before tillage.

Also for control, apply 16 fluid ounces of this product plus 0.5 pound active ingredient of 2,4-D plus 0.5 to 1 percent nonionic surfactant by total volume in 3 to 10 gallons of water per acre in the late summer or fall. Apply when plants are actively growing and most have reached the early bud stage of growth. Allow 7 or more days after application before tillage.

**Spurge, leafy -** For suppression, apply 16 fluid ounces of this product plus 0.5 pound active ingredient 2,4-D plus 0.5 to 1 percent nonionic surfactant by total spray volume in 3 to 10 gallons of water per acre in the late summer or fall. Apply when plants are actively growing. If mowing has occurred prior to treatment, apply when most of the plants are 12 inches tall. Allow 7 or more days after application before tillage.

**Starthistle, yellow -** Best results are obtained when applications are made during periods of active growth, including the rosette, bolting and early flower stages. For spray-to-wet applications, apply this product as a 2 percent solution. For broadcast applications, apply 2 quarts per acre in 10 to 40 gallons per acre of water carrier.

**Sweet Potato, wild/Thistle, artichoke -** Apply this product as a 2 percent solution using hand-held equipment. Apply to actively growing weeds that are at or beyond the bloom stage of growth. Repeat applications may be required. Allow the plant to reach the specified stage of growth before retreatment. Allow 7 or more days before tillage.

**Thistle, Canada** - Apply 2 to 3 quarts of this product per acre. Apply to actively growing thistles when most are at or beyond the bud stage of growth. After harvest, mowing or tillage in the late summer or fall, allow at least 4 weeks for initiation of active growth and rosette development prior to the application of this product. Fall treatments must be applied before a killing frost. Allow 3 or more days after application before tillage.

For suppression of Canada thistle, apply 1 quart per acre of this product, or 1 pint of this product plus 0.5 pound a.i. 2,4-D per acre, plus 0.5 to 1 percent nonionic surfactant by total spray volume in 3 to 10 gallons of water per acre in the late summer or fall after harvest, mowing or tillage. Allow rosette regrowth to a minimum of 6 inches in diameter before treating. Applications can be made as 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.

**Torpedograss** - Apply 4 to 5 quarts of this product per acre to provide partial control of torpedograss. Apply to actively growing torpedograss 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. Allow 7 or more days after application before tillage.

**Trumpetcreeper** - For control, apply 2 quarts of this product per acre in 5 to 10 gallons of water per acre. Apply to actively growing plants in late September or October, which are at least 18 inches tall and have been growing 45 to 60 days since the last tillage operation. Make applications at least 1 week before a killing frost.

Other perennials listed on this label - Apply 3 to 5 quarts of this product per acre. Apply when actively growing and most have reached early head or early bud stage of growth. Allow 7 or more days after application before tillage.

# **WOODY BRUSH**

When applied as directed under the conditions described, this product CONTROLS or PARTIALLY CONTROLS the following woody brush, plants and trees:

Alder Alnus spp. Ash Fraxinum spp. Aspen, quaking Populus tremuloides **Bearmat (Bearclover)** Chamaebatia foliolosa Beech

Fagus grandifolia Birch Betula spp.

**Blackberry** Rubus spp. Blackgum

Nyssa spp. Bracken Peridium spp.

Broom: French

Cytisus monspessulanus

Scotch Cvtisus scoparius Buckwheat, California\*

Eriogonum fasciculatum Cascara\*

Rhamnus purshiana Catsclaw\* Acacia greggi Ceanothus\*

Ceanothus spp. Chamise

Adenostoma fasciculatum Cherry:

Bitter

Prunus emarginata

Black

Prunus serotina

Pin

Prunus pensylvanica

Coyote brush

Baccharis consanguinea

Creeper, Virginia\*

Parthenocissus quinquefolia

Dewberry Rubus trivialis Dogwood\* Cornus spp. Elderberry Sambucus spp. Elm\* Ulmus spp.

**Eucalyptus** Eucalyptus spp.

Gorse

Ulex europaeus

Hasardia\*

Haplopappus squamosus

Hawthorn Crataegus spp. Hazel Corylus spp. Hickory\* Carya spp.

Holly, Florida/Brazilian Peppertree\*

Schinus terebinthifolius

Honeysuckle Lonicera spp. Hornbean, American\* Carpinus caroliniana

Kudzu Pueraria lobata

Locust, black\* Robinia pseudoacacia

Madrone

Arutus menziesii

Manzanita Arctostaphylos spp.

Maple: Red\*\* Acer rubrum Sugar

Acer saccharum

Vine

Acer circinatum Monkey Flower\* Mimulus guttatus

Oak: Black\*

> Quercus velutina **Northern Pin** Quercus palustris

Post

Quercus stellata

Red

Quercus rubra Southern Red Quercus falcata White\*

Quercus alba Persimmon\*

Diospyros spp. Pine

Pinus spp.

Poison Ivy Rhus radicans **Poison Oak** Rhus toxicodendron Poplar, yellow\*

Liriodendron tulipifera Raspberry Rubus spp. Redbud, eastern Cercis canadensis

Rose, multiflora Rosa multiflora Russian olive\*\*\*

Elaeagnus angustifolia

Sage: black, white Salvia spp.

Sagebrush, California Artemisia californica

Salmonberry Rubus spectabilis Salt cedar

Tamarixs spp. Sassafras

Sassafras aibidum

Sourwood

Oxydendrum arboreum

Sumac Poison\* Rhus vernix Smooth\* Rhus glabra Winged\* Rhus copallina

Sweetgum

Liquidambar styraciflua Swordfern\*

Polystichum munitum Tallowtree, Chinese Sapium sebiferum

Tan Oak

Lithocarpus densiflorus

**Thimbleberry** Rubus parviflorus Tobacco, tree\* Nicotiana glauca Trumpetcreeper Campsis radicans Waxmyrtle, southern\*

Myrica cerifera Willow

Salix spp.

<sup>\*</sup>Partial control

<sup>\*\*</sup>See below for control or partial control instructions.

<sup>\*\*\*</sup>This product is not registered in California for use on Russian olive.

NOTE: If brush has been mowed or tilled or trees have been cut, do not treat until regrowth has reached the specified stages of growth. Apply this product when plants are actively growing and, unless otherwise directed, after full leaf expansion. Use the higher rate for larger plants and/or dense areas of growth. On vines, use the higher rate for plants that have reached the woody stage of growth.

Best results are obtained when application is made in late summer or fall after fruit formation.

In arid areas, best results are obtained when application is 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

See "DIRECTIONS FOR USE" and "MIXING, ADDITIVES and APPLICATION INSTRUCTIONS" sections of this label for labeled uses and specific application instructions.

Apply this product as follows to control or partially control the following woody brush and trees.

leaf drop has occurred. Reduced performance may result if fall treatments are made following a frost.

**Alder/Dewberry/Honeysuckle/Post Oak/Raspberry** - For control, apply 3 to 4 quarts per acre of this product as a broadcast spray or as a 1 to 1.5 percent solution with hand-held equipment.

Aspen, quaking/Cherry: bitter, black, pin/Hawthorn/Oak, southern red/Sweetgum/Trumpetcreeper - For control, apply 2 to 3 quarts of this product per acre as a broadcast spray or as a 1 to 1.5 percent solution with hand-held equipment.

**Birch/ Elderberry/ Hazel/ Salmonberry/Thimbleberry -** For control, apply 2 quarts per acre of this product as a broadcast spray or as a 1 percent solution with hand-held equipment.

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

Broom: French, Scotch - For control, apply a 1.5 to 2 percent solution with hand-held equipment.

**Buckwheat, California/Hasardia/Monkey Flower/ Tobacco, tree** - For partial control of these species, apply a 1 to 2 percent solution of this product as a foliar spray with hand-held equipment. Thorough coverage of foliage is necessary for best results.

Catsclaw - For partial control, apply as a 1 to 1.5 percent solution with hand-held equipment.

Coyote Brush - For control, apply a 1.5 to 2 percent solution with hand-held equipment when at least 50 percent of the new leaves are fully developed.

**Eucalyptus -** For control of eucalyptus resprouts, apply a 2 percent solution of this product with hand-held equipment when resprouts are 6 to 12 feet tall. Ensure complete coverage. Apply when plants are growing actively. Avoid application to drought-stressed plants.

**Kudzu -** For control, apply 4 quarts of this product per acre as a broadcast spray or as a 2 percent solution with hand-held equipment. Repeat applications will be required to maintain control.

**Madrone resprouts** - For suppression or partial control, apply a 2 percent solution of this product to resprouts less than 3 to 6 feet tall. Best results are obtained with spring/early summer treatments.

**Maple, red** - For control, apply as a 1 to 1.5 percent solution with hand-held equipment when at least 50 percent of the new leaves are fully developed. For partial control, apply 2 to 4 quarts of this product per acre as a broadcast spray.

Maple, sugar/Oak, northern pin/Oak, red - For control, apply as a 1 to 1.5 percent solution with hand-held equipment when at least 50 percent of the new leaves are fully developed.

**Poison lvy/Poison Oak** - For control, apply 4 to 5 quarts of this product per acre as a broadcast spray or as a 2 percent solution with handheld equipment. Repeat applications may be required to maintain control. Fall treatments must be applied before leaves lose green color.

Rose, multiflora - For control, apply 2 quarts of this product per acre as a broadcast spray or as a 1 percent solution with hand-held equipment. Treatments should be made prior to leaf deterioration by leaf-feeding insects.

Sage, black/Sagebrush, California/Chamise/Tallowtree, Chinese - For control of these species, apply a 1 percent solution of this product as a foliar spray with hand-held equipment. Thorough coverage of foliage is necessary for best results.

**Tan oak resprouts** - For suppression or partial control, apply a 2 percent solution of this product to resprouts less than 3 to 6 feet tall. Best results are obtained with fall applications.

**Willow** - For control, apply 3 quarts of this product per acre as a broadcast spray or as a 1 percent solution with hand-held equipment. **Other Woody Brush and Trees listed on this label** - For partial control, apply 2 to 5 quarts of this product per acre as a broadcast spray or as a 1 to 2 percent solution with hand-held equipment. For difficult to control perennial weeds and woody brush and trees, where plants are growing under stressed conditions or where infestations are dense, **RAZOR HERBICIDE** may be used at 5 to 10 quarts per acre for enhanced results. The annual maximum use rate for **RAZOR HERBICIDE** is 10.6 quarts per acre per year.

# **NON-CULTIVATED USES**

#### NON-CULTIVATED, RECREATIONAL AND PUBLIC AREAS

Additional surfactant may be used. If additional surfactant is to be used follow the manufacturer's rates and instructions for use of the surfactant. When applied as directed and under the conditions described in the "Weeds Controlled" section of the label booklet for this product, this herbicide will control or partially control the labeled weeds growing in the following areas: airfields; airports; alleys, lanes, trails & access roads; around commercial or industrial structures or outbuildings; around farm and ranch structures and outbuildings; around ornamental gardens; around ornamental trees & shrubs; bare ground; beaches; campgrounds; construction sites; ditch banks; drive-in theaters; driveways & ramps; dry ditches & canals; fences & fencerows; firebreaks; golf courses; gravel yards; habitat restoration & management areas; highways & roadsides (including aprons, medians, guardrails & right of ways); industrial plant sites; industrial areas; lumber yards; mulched areas; natural areas; paths and trails; parking areas; parks; paved areas; petroleum & other tank farms; pumping installations; pipeline, power, telephone & utility rights-of-way; power stations; preplant to turf & ornamental plants; railroad rights-of way; recreation areas; refineries; resorts; schools; sidewalks; sports areas; storage areas; substations; tennis courts; uncropped farmstead areas; uncultivated non-agricultural areas; vacant lots; walkways; wastelands; & wildlife habitat areas.

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

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

# **Chemical mowing - Perennials**

This product will suppress perennial grasses listed in this section to serve as a substitute for mowing. Use 8 fluid ounces of this product per acre when treating tall fescue, fine fescue, orchardgrass or quackgrass covers. Use 6 fluid ounces of this product per acre when treating Kentucky bluegrass. Apply treatments in sufficient volume of water to ensure thorough coverage.

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

# **Chemical mowing - Annuals**

For growth suppression of some annual grasses, such as annual ryegrass, wild barley and wild oats growing in coarse turf on roadsides or other industrial areas, apply 4 to 5 fluid ounces of this product in sufficient volume of water to ensure thorough coverage.

Applications should be made when annual grasses are actively growing and before the seedheads are in the boot stage of development. Treatments may cause injury to the desired grasses.

# **RAILROADS**

# Bare ground. Ballast and Shoulders, Crossings, and Spot treatment

This product may be used to maintain bare ground on railroad ballast and shoulders. This product may be used to improve line-of-sight at railroad crossings and reduce the need for mowing along rights-of-way, wayside structures, and other similar areas. This product may be tank mixed with other herbicides for ballast, shoulder, spot, bare ground, crossing treatments UNLESS SPECIFICALLY PROHIBITED BY THE PRODUCT LABEL.

#### Brush control

This product may be used to control woody brush and trees on railroad rights-of-way. Apply 4 to 10 quarts of this product per acre as a broadcast spray, using boom-type or boom-less nozzles. Up to 80 gallons of spray solutions per acre may be used. Apply a 3/4 to 2 percent solution of this product when using high-volume spray-to-wet applications. Apply a 5 to 10 percent solution of this product when using low volume directed sprays for spot treatment. This product may be tank mixed with other products for enhanced control of woody brush and trees UNLESS SPECIFICALLY PROHIBITED BY THE PRODUCT LABEL.

# **Actively Growing Bermudagrass and Bermudagrass Release**

This product may be used to control or partially control many annual and perennial weeds for effective release of actively growing Bermudagrass. Apply 1 to 3 pints of this product in up to 80 gallons of spray solutions per acre. Use the lower rate when treating annual weeds below 6 inches in height (or runner length). Use the higher rate as weeds increase in size or as they approach flower or seedhead formation. These rates will also provide partial control of the following perennial species:

Bahiagrass; Bluestem, silver; Fescue, tall; Johnsongrass; Trumpetcreeper; Vaseygrass

This product may be tank-mixed with Spyder (Sulfometuron methyl) If tank-mixed, use no more than 1 to 3 pints of this product with 1 to 2 ounces of Spyder per acre. Use the lower rates of each product to control annual weeds less than 6 inches in height (or runner length) that are listed in this label and the Spyder label. Use the higher rates as annual weeds increase in size and approach the flower or seedhead stages. These rates will also provide partial control of the following perennial weeds:

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

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

#### **ROADSIDES**

#### **Shoulder treatments**

This product may be used on road shoulders.

# Guardrails and other obstacles to mowing

This product may be used to control weeds growing under guardrails and around signposts and other objects along the roadside.

#### Spot treatment

This product may be used as a spot treatment to control unwanted vegetation growing along roadsides.

#### Tank mixtures

This product may be tank mixed with other herbicides for shoulder, guardrail, spot and bare ground treatments UNLESS SPECIFICALLY PROHIBITED BY THE PRODUCT LABEL.

# Release of Bermudagrass or Bahiagrass

#### **Dormant applications**

This product may be used to control or partially control many winter annual weeds and tall fescue for effective release of dormant bermudagrass or bahiagrass. Treat only when turf is dormant and prior to spring greenup. This product may also be tank-mixed with Spyder (Sulfometuron methyl) for residual control. Tank mixtures of this product with Spyder may delay greenup.

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

Apply 8 to 64 fluid ounces of this product per acre alone or in a tank mixture with 1/4 to 1 ounce per acre of Spyder. Use only in areas where bermudagrass or bahiagrass are desirable ground covers and where some temporary injury or discoloration can be tolerated. To avoid delays in greenup and minimize injury, add no more than 1 ounce of Spyder per acre on bermudagrass and no more than 0.5 ounce of Spyder per acre on bahiagrass and avoid treatments when these grasses are in semi-dormant condition.

# **Actively growing bermudagrass**

This product may be used to control or partially control many annual and perennial weeds for effective release of actively growing bermudagrass. Apply 1 to 3 pints of this product per acre. Use the lower rate when treating annual weeds below 6 inches in height (or runner length). Use the higher rate as weeds increase in size or as they approach flower or seedhead formation. These rates will also provide partial control of the following perennial species:

Bahiagrass; Bluestem, silver; Fescue, tall; Johnsongrass; Trumpetcreeper; Vaseygrass

This product may be tank-mixed with Spyder (Sulfometuron methyl). If tank-mixed, use no more than 1 to 2 pints of this product with 1 to 2 ounces of Spyder per acre. Use the lower rates of each product to control annual weeds less than 6 inches in height (or runner length) that are listed in this label and the Spyder label. Use the higher rates as annual weeds increase in size and approach the flower or seedhead stages. These rates will also provide partial control of the following perennial weeds:

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

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

# Actively growing bahiagrass

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

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

# TANK MIXTURES FOR NON-CULTIVATED SITES AND FORESTRY SITE PREPARATIONS

# **RAZOR HERBICIDE plus Spyder (Sulfometuron methyl)**

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

This tank mixture may also be used as a site preparation treatment for sites to be planted to jack pine, loblolly pine, red pine, slash pine, Virginia pine and other conifer species. When applied as directed for "NON-CULTIVATED USES" under the conditions described, this product plus Spyder provides control of annual weeds listed in the "WEEDS CONTROLLED" section of the label for this product and control or partial control of the perennial weeds listed below.

Apply 1 to 2 quarts of this product with 2 to 4 ounces of Spyder per acre as a broadcast spray to actively growing weeds. This mixture may be applied by aerial equipment in site prep operations. When applied by air, use the specified rates. This product plus Spyder tank mixtures may not be applied by air in California.

For control of annual weeds, use the lower rates of these products.

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

Bahiagrass; Bermudagrass\*; Broomsedge; Dock, curly; Dogfennel; Fescue, tall; Johnsongrass\*\*; Poorjoe\*\*; Quackgrass; Trumpetcreeper\*; Vaseygrass; Vervain, blue

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

# TANK MIXTURES NON-CULTIVATED SITES

When applied as a tank mixture, this product provides control of the emerged annual weeds and partial control to the emerged perennial weeds listed in this label. THIS PRODUCT MAY BE TANK MIXED WITH MOST NON-CULTIVATED HERBICIDES UNLESS PROHIBITED BY THE SPECIFIC LABEL.

Use according to the most restrictive label directions for each product in the mixture.

# **FARMSTEAD WEED CONTROL**

When applied as directed for "NON-CULTIVATED USES", under conditions described, this product controls undesirable vegetation listed on this label around farmstead building foundations, along and in fences, shelterbelts and for nonselective farmstead weed control. For specific rates of application and instructions for control of various annual and perennial weeds, see the "WEEDS CONTROLLED" section of this label.

# PRODUCT WEED CONTROL AND TRIM AND EDGE

This product may be used to control annual weeds, perennial weeds and woody brush found in any part of the farmstead, including around building foundations and equipment storage areas, along and in fences, in dry ditches and canals, along ditchbanks, farm roads, shelterbelts, and prior to planting landscape ornamentals.

This product may be tank mixed with labeled rates of other products, provided that the specific product used is registered for the same non-cultivated sites, timing and method of application. Refer to the individual product labels for approved farmstead sites and application rates. Read and follow label directions, restrictions and precautions of all products in the tank mix. Observe the most restrictive label statements of various tank mix products used.

WEEDS	HEIGHT OF WEED (Inches)	RATE (Fluid Ounces per Acre)		
Annual Weeds	< 6 6 to 12 >12	22 32 44		
Perennial Weeds		44 fluid ounces to 3.3 quarts		

For application of tank mixtures with these products using backpack sprayers, handguns, or other hand-held applicators, see "WEEDS CONTROLLED – APPLICATIONS RATE TABLE" section of the label for specified label rates of this product.

# **GREENHOUSE AND SHADEHOUSE**

This product may be used to control weeds in and around greenhouses and shadehouses.

Desirable vegetation must not be present during application and air circulation fans must be turned off until after the application has dried. Do not use in residential greenhouses.

# **CHEMICAL MOWING**

This product will suppress perennial grasses listed in this section to serve as a substitute for mowing.

GRASSES	RATE (Fluid Ounces per Acre)	USE INSTRUCTIONS
Bahiagrass Fine fescue Kentucky bluegrass Orchardgrass Quackgrass covers Tall fescue	4	Apply treatments in a minimum of 10 gallons of spray solution per acre.
Bermudagrass	11	
Paragrass Torpedograss	44	

- · Chemical mowing applications may be made along farm ditches and other parts of farmsteads.
- Use only in areas where some temporary injury or discoloration of perennial grasses can be tolerated.

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

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

#### **FARM DITCHES**

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

Apply treatments to actively growing perennial grass covers. For best spray distribution and coverage, use flat fan nozzles.

Additional surfactant may be used. If additional surfactant is to be used follow the manufacturer's rates and instructions for use of the surfactant.

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

# CONSERVATION RESERVE PROGRAM (CRP ACRES)

This product can be used to control undesirable vegetation when rotating out of CRP acres or to suppress competitive growth and seed production of undesirable vegetation in CRP acres.

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

CRP applications may be made with wiper applicators or conventional spray equipment.

For selective applications with broadcast spray equipment, apply 12 to 16 ounces per acre of this product in early spring before desirable CRP grasses, such as crested and tall wheatgrass, break dormancy and initiate green growth. Late fall applications can be made after desirable perennial grasses have reached dormancy. Some stunting of CRP perennial grasses will occur if applications are made when plants are not dormant.

# **DORMANT RANGELAND**

This product will control or suppress weeds in dormant rangeland. Refer to the "WEEDS CONTROLLED SECTION" of this label.

Apply 8 to 16 ounces per acre of this product in the early spring when the weeds have greened up, but desirable grasses, such as crested and tall wheatgrass are still truly dormant.

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.

Do not use additional surfactant or ammonium sulfate when spraying dormant rangeland grasses with this product.

# BROMUS SPECIES AND MEDUSAHEAD IN PASTURE AND RANGELANDS

**Bromus Species:** This product may be used to treat downy brome (Bromus japonicas), soft chess (Bromus mollis) and cheatgrass (Bromus secalinus) found in industrial, rangeland and pasture sites. Apply 8 to 16 fluid ounces of product per acre on a broadcast basis. For best results, treatment should coincide with early seedhead emergence of the most mature plants. Delaying the application until this growth stage will maximize the emergence of other weedy grass flushes. Applications should be made to the same site each year until seed banks are depleted and the desirable perennial grasses are able to become reestablished on the side.

**Medusahead:** To treat medusahead, apply 16 fluid ounces of this product per acre as soon as plants are actively growing, and prior to the 4-leaf stage. Applications may be made in the fall or spring.

Application Equipment and Techniques: Applications may be made using ground or aerial equipment. Aerial applications for these uses may be made using fixed wing or helicopter equipment. For aerial applications, apply in 2 to 10 gallons of water per acre. For applications using ground equipment, apply in 10 to 20 gallons of water per acre.

When applied as directed there are no grazing restrictions.

# HABITAT MANAGEMENT

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

**Habitat Restoration and Maintenance -** When applied as directed, exotic and other undesirable vegetation may be controlled in habitat management areas. Applications can be made to allow recovery of native plant species, prior to planting desirable native species, and for similar broad spectrum vegetation control requirements in habitat management areas. Spot treatments can be made to selectively remove unwanted plants for habitat maintenance and enhancement. For spot treatments, care should be exercised to keep spray off desirable plants.

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

**RESTRICTIONS:** There are no rotational restrictions for planting wildlife food species or for allowing native species to repopulate the treated area following an application of this product.

# ORNAMENTALS, NURSERIES (PLANTS AND TREES) AND CHRISTMAS TREES

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

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

When applied as instructed for the conditions described for "NON-CULTIVATED USES", this product controls undesirable vegetation listed on this label prior to planting, within and around greenhouses and shadehouses, and as a postdirected spray around established ornamentals and Christmas trees. This product may also be used to trim and edge around trees, buildings, sidewalks, roads, potted plants and other objects in a nursery setting.

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

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

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

Greenhouse/Shadehouse Use - This product may be used to control weeds listed on this label which are growing in greenhouses.

Desirable vegetation must not be present during application and air circulation fans must be turned off.

**Postdirected Spray** - Use as a postdirected spray around established woody ornamental species, nursery species or Christmas trees such as those listed below. Care must be exercised to avoid contact of spray, drift or mist with foliage or green bark of established ornamental species.

Arborvitae; Azalea; Boxwood; Crabapple; Euonymus; Fir; Hollies; Jojoba; Lilac; Magnolia; Maple; Oak; Privet; Pine; Spruce.

# SILVICULTURAL SITES and RIGHTS-OF-WAY

NOTE: DO NOT USE AS AN OVER-THE-TOP BROADCAST SPRAY IN SILVICULTURAL NURSERIES

When applied as directed for "NON-CULTIVATED USES" under conditions described, this product controls undesirable vegetation listed on this label.

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

Do not exceed 10.6 quarts of this product per acre per year.

**Aerial Application -** This product may be applied using aerial spray equipment for silvicultural site preparation, and rights-of-way treatments. See the "APPLICATION EQUIPMENT and TECHNIQUES" part of the "MIXING, ADDITIVES and APPLICATION INSTRUCTIONS" section of this label for information on how to apply this product by air.

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

#### SITE PREPARATION

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

# **POSTDIRECTED SPRAY**

In established silvicultural sites, use as a spray on the foliage of undesirable vegetation. Care must be exercised to avoid contact of spray, drift or mist with foliage or green bark of desirable species.

# **CUT STUMP TREATMENTS**

Woody vegetation may be controlled by treating freshly cut stumps of trees and resprouts with this product. Apply this product using suitable equipment to ensure coverage of the entire cambium. Cut vegetation close to the soil surface. Apply a 50 to 100 percent solution of this product to the freshly-cut surface immediately after cutting. Delays in application may result in reduced performance.

For best results, applications should be made during periods of active growth and full leaf expansion.

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

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

# INJECTION AND FRILL APPLICATIONS

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

This treatment WILL CONTROL the following woody species:

Oak; Poplar; Sweetgum; Sycamore

This treatment WILL SUPPRESS the following woody species:

Blackgum; Dogwood; Hickory; Maple, red

# NON-FOOD PERENNIAL GRASS & TREE BIOENERGY CROPS USE INSTRUCTIONS

This product may be applied as preplant broadleaf weed control, preemergent broadleaf weed control, and for broadleaf weed control when the crop is in a state of dormancy, for giant reedgrass (*Arundo donax*), switchgrass (*Panicum virgatum*) giant Miscanthus (*Miscanthus x giganteus*) and other non-food perennial grass bioenergy crops. It also can be applied as preplant broadleaf weed control, preemergent broadleaf weed control, and for broadleaf weed control when the crop is in a state of dormancy, for broadleaf weed control in hybrid poplar trees, cottonwood trees and willow trees grown as bioenergy crops.

Apply when weeds are actively growing.

#### PREPLANT / PREEMERGENCE - WEED CONTROL

This product can be used as a preplant or preemergent broadleaf weed control to control undesirable vegetation in bioenergy crops. Bioenergy crops include giant reedgrass (*Arundo donax*), switchgrass (*Panicum virgatum*) giant Miscanthus (*Miscanthus x giganteus*), and other non-food perennial grass bioenergy crops. It can also be used as a preplant or preemergent broadleaf weed control to control undesirable vegetation in hybrid poplar trees, cottonwood trees and willow trees grown as bioenergy crops. Applications must be made prior to emergence of the crop.

This product does not provide residual control; therefore, delay application until maximum weed emergence. Repeat treatments maybe necessary to control later germinating weeds.

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

# CROP STATE OF DORMANCY - WEED CONTROL

This product can be used to control undesirable vegetation when the bioenergy crop is in a state of dormancy for broadleaf weed control. Bioenergy crops include giant reedgrass (*Arundo donax*), switchgrass (*Panicum virgatum*) giant Miscanthus (*Miscanthus x giganteus*), and other non-food perennial grass bioenergy crops. It also can be used to control undesirable vegetation in hybrid poplar trees, cottonwood trees and willow trees grown as bioenergy crops when the bioenergy crop is in a state of dormancy.

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

Applications may be made with wiper applicators or conventional spray equipment. For selective applications with broadcast spray equipment, apply 12 to 16 ounces per acre of this product in early spring before desirable bioenergy crops break dormancy and initiate green growth. Late fall applications can be made after desirable perennial grasses have reached dormancy. Treat when bioenergy crops are in a state of dormancy. Bioenergy crop injury may occur if applications are made when crops are not dormant.

# **RESTRICTIONS AND LIMITATIONS**

- Maximum of 5.0 quarts of this product per acre per year.
- Do not make more than 2 applications per year.
- Applications must be made at least 30 days prior to planting.
- Use sufficient gallonage for thorough and uniform coverage, but a minimum of 8 gallons per acre for broadcast application.
- Do not apply through any type of irrigation system.
- Do not allow people (other than applicator) or pets on treatment area during application.
- Do not enter treatment areas until sprays have dried.
- Apply to actively growing grass and broadleaf weeds.
- This product does not provide residual control; therefore, delay application until maximum weed emergence. Repeat treatments maybe necessary to control later germinating weeds.
- Do not hay or graze treated plantings.
- Treated plantings not to be consumed by human or animal.

# TURFGRASSES AND GRASSES FOR SEED PRODUCTION

# PREPLANT AND RENOVATION

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

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

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

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

#### TURFGRASSES

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

Where existing vegetation is growing under mowed turfgrass management in such sites as apartment complexes, residential areas and sod farms, apply this product after omitting at least one regular mowing to allow sufficient growth for good interception of the spray. Desirable turfgrasses may be planted following the above procedures.

# GRASSES FOR SEED PRODUCTION

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

If application rates total 3 quarts per acre or less, no waiting period between treatment and feeding or livestock is required. If the rate is greater than 3 quarts per acre, remove domestic livestock before application and wait 8 weeks after application before garzing or harvesting.

# ANNUAL WEED CONTROL IN DORMANT BERMUDAGRASS AND BAHIAGRASS TURF

When applied as directed for "NON-CULTIVATED USES" under the conditions described, this product will provide control or suppression of many winter annual weeds and tall fescue for effective release of dormant bermudagrass and bahiagrass turf. Refer to the rate table for **RAZOR HERBICIDE** alone under the "RELEASE OF BERMUDAGRASS and BAHIAGRASS" section of this label for specified rates and volumes on the species to be suppressed or controlled. Treat only when turf is dormant and prior to spring greenup. Spot treatments or broadcast applications of this product in excess of 16 fluid ounces per acre may result in injury or delayed greenup in highly maintained turfgrass areas; i.e., golf courses, lawns, etc. DO NOT APPLY TANK MIXTURES of this product plus Spyder (Sulfometuron methyl) in highly maintained turfgrass areas.

# RELEASE OF BERMUDAGRASS OR BAHIAGRASS

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

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

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

# **WEEDS CONTROLLED**

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

Apply the specified rates of this product alone or as a tank mixture in sufficient water to ensure thorough coverage.

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



W	EEDS CONT	ROLLED OR SUF	PRESSED WITH	RAZOR HERBICI	IDE ALONE*	
WEED						
SPECIES	8	12	16	24	32	64
Barley, little	S	С	С	С	С	С
Bedstraw, catchweed	S	С	С	С	С	С
Bluegrass, annual	S	С	С	С	C	С
Chervil	S	С	С	С	С	С
Chickweed, common	S	С	С	С	С	С
Clover, crimson	•	S	S	С	С	С
Clover, large hop	•	S	S	С	C	C
Fescue, tall	•	•	•	•	S	S
Geranium, Carolina	•	•	S	S	С	С
Henbit	•	S	С	С	С	С
Ryegrass, Italian	•	•	S	С	С	С
Speedwell, corn	S	С	С	С	C	С
Vetch, common	•	•	S	С	С	С

NOTE: C = Control

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

WEEDS CONTROLLED OR SUPPRESSED WITH RAZOR HERBICIDE PLUS SPYDER (SULFOMETURON METHYL)*								
	RAZOR HERBICIDE (Fluid Ounces/Acre)	8	12	12	16	16	12	16
WEED SPECIES	+	+	+	+	+	+	+	+
0. 20.20	Spyder (Ounces/Acre)	1/4	1/4	1/2	1/4	1/2	1	1
Barley, little		С	С	С	С	С	С	С
Bedstraw, catchweed		С	С	С	С	С	С	С
Bluegrass, annual		S	С	С	С	С	С	С
Chervil		С	С	С	С	С	С	С
Chickweed, common		S	С	С	С	С	С	С
Clover, crimson		S	S	S	S	С	С	С
Clover, large hop		•	•	S	S	С	С	С
Fescue, tall		•	•	•	•	•	S	S
Geranium, Carolina		•	S	S	С	С	С	С
Henbit		•	S	С	С	С	С	С
Ryegrass, Italian		•	S	S	С	С	С	С
Speedwell, corn		S	С	С	С	С	С	С
Vetch, common		С	С	С	С	С	С	С

NOTE: C = Control

S = suppression
\*These rates or mixtures of rates apply only to sites where an established competitive turf if present.

# RELEASE OF ACTIVELY GROWING BERMUDAGRASS

When applied as directed, this product will aid in the release of bermudagrass by providing control of annual species listed in the "WEEDS CONTROLLED" section of this and the Spyder (Sulfometuron methyl) label and suppression or partial control of certain perennial weeds.

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

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

Bahiagrass; Bluestem, silver; Fescue, tall; Johnsongrass\*; Trumpetcreeper\*\*; Vaseygrass

- \*Control at the higher rates.
- \*\*Suppression at higher rates only.

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

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

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

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

- \*Suppression at higher rates only.
- \*\*Control at the higher rates.

# COOL SEASON TURF GROWTH REGULATION

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

This product is for management of coarse turf on roadside rights-of-way. Use in areas such as airports, apartment complexes, Christmas tree farms, ditch banks, dry ditches, dry canals, fencerows, golf courses, highways, industrial sites, lumberyards, manufacturing sites, office complexes, ornamental nurseries, parks, parking areas, pipelines, petroleum tank farms and pumping installations, railroads, recreational pipeline areas, residential areas, rights-of-way, roadsides (including guardrails and shoulders), sod or turf seed farms, schools, storage areas, substations and warehouse areas. Do not use on high-quality turf or other areas where some turf color changes cannot be tolerated. Slight turf discoloration may occur but turf will regreen and regrow under moist conditions as effects of this product wear off.

Apply 4 to 6 fluid ounces of this product per acre alone or in a tank mixture.

Apply the rates of this product alone or as a tank mixture in sufficient water to ensure thorough coverage.

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

# TALL FESCUE/SMOOTH BROME

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

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

#### **ANNUAL GRASSES**

For growth suppression of some annual grasses such as annual ryegrass, wild barley and wild oats, apply 3 to 4 fluid ounces of this product per acre. Applications should be made when annual grasses are actively growing and before the seedheads are in the boot stage of development. Treatments made after seedhead emergence may cause injury to the desired grasses.

# **TANK MIXTURES**

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

# Tank mixtures plus 2,4-D Amine

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

#### **TALL FESCUE**

# RAZOR HERBICIDE plus Corsair® (Chlorsulfuron)

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

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

# **RAZOR HERBICIDE plus Spyder (Sulfometuron methyl)**

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

# RAZOR HERBICIDE plus Manor® (Metsulfuron methyl)

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

#### SMOOTH BROME

# RAZOR HERBICIDE Plus Spyder (Sulfometuron methyl)

For suppression of smooth brome growth and seedheads and control or partial control of some annual weeds, apply this tank mixture after greenup and prior to boot-to-seedhead stage of development. use up to 0.25 ounce of sulfometuron methyl per acre.

# **CROPPING SYSTEMS**

When applied as directed for "CROPPING SYSTEMS", under the conditions described, this product controls annual and perennial weeds listed on this label, prior to the emergence of direct seeded crops or prior to transplanting of crops listed on this label. In-crop application to Roundup Ready, soybeans and cotton may be made according to the directions given in those respective sections below.

See "PRODUCT INFORMATION" and "MIXING, ADDITIVES AND APPLICATION INSTRUCTIONS" sections of this label for essential product performance information.

See the following "CROPPING SYSTEMS" sections for specific uses.

EXTREME CARE MUST BE EXERCISED TO AVOID CONTACT OF SPRAY WITH FOLIAGE, GREEN STEMS OR FRUIT OF DESIRABLE CROPS. PLANTS. TREES OR OTHER DESIRABLE VEGETATION SINCE SEVERE DAMAGE OR DESTRUCTION MAY RESULT.

Repeat treatments may be necessary to control weeds regenerating from underground parts or seed. Except as otherwise specified on this label, repeat treatments must be made before the crop emerges in accordance with the instructions of this label.

Except as otherwise specified in a crop section of this label, the combined total of all treatments must not exceed 8 quarts per acre of this product per year.

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

Do not harvest or feed treated vegetation for 8 weeks following application. Following spot treatment or selective equipment use, allow 14 days before grazing domestic livestock or harvesting forage grasses and legumes.

# ROW CROPS

CORN (ALL)*	COTTON*	PEANUTS	SORGHUM (MILO)*	SOYBEANS*	SUGARCANE*
CEREAL GRAINS BARLEY*	(PEARL, PROSO)*	RYE*	TEOSINTE*	WHEAT (ALL)*	
BUCKWHEAT* MILLET	OATS* RICE**	QUINOA* TEFF*	TRITICALE*	WILD RICE*	
CITRUS					
CALAMONDIN CHIRONJA	GRAPEFRUIT KUMQUAT	LIME MANDARIN	ORANGE (ALL) PUMMELO	TANGERINE TANGORS	
CITRON	LEMON	ORANGE	TANGELO	TANGORS	
TREE NUTS					
ALMOND	BUTTERNUT	CHINQUAPIN	HICKORY NUT	PISTACHIO	
BEECHNUT BRAZIL NUT	CASHEW CHESTNUT	FILBERT (HAZELNUT)	MACADAMIA PECAN	WALNUT (BLACK, ENGLISH)	
SMALL FRUITS AND	BERRIES				
BLACKBERRY	CRANBERRY	ELDERBERRY	LOGANBERRY	RASPBERRY	
BLUEBERRY BOYSENBERRY	CURRANT DEWBERRY	GOOSEBERRY HUCKLEBERRY	OLALLIEBERRY	(BLACK, RED)	
TREE FRUITS	DEW DET III	HOOKELBERNY			
APPLE	CHERRY	LOQUAT	NECTARINE	PEACH	PLUM / PRUNE (ALL)
APRICOTS	(SWEET, SOUR)	MAYHAW	OLIVE	PEAR	QUINCE

VEGETABLES  ARTICHOKE, JERUSALEM ASPARAGUS* BEANS (ALL) BEET GREENS BEETS (RED, SUGAR) BROCCOLI (ALL) BRUSSELS SPROUTS CABBAGE (ALL) CABBAGE, CHINESE	CANTALOUPE*** CARROT CAULIFLOWER CASABA MELON*** CELERIAC CELERY CHARD, SWISS CHICORY COLLARDS CRENSHAW MELON*** CUCUMBER***	EGGPLANT*** ENDIVE GARLIC*** GOURDS*** GROUND CHERRY*** HONEYDEW MELON*** HONEY BALL MELON*** HORSERADISH KALE	KOHLRABI LEEK LENTILS LETTUCE MANGO MELON*** MELONS (ALL)*** MUSKMELON*** MUSTARD GREENS OKRA ONION PARSLEY PARSNIPS	PEAS (ALL) PEPPER (ALL)*** PERSIAN MELON*** POTATO (IRISH, SWEET) PUMPKIN*** RADISH RAPE GREENS RHUBARB RUTABAGA SHALLOT SPINACH (ALL)	SQUASH (SUMMER, WINTER)*** TOMATILLO*** TOMATO***† TURNIP WATERCRESS*** WATERMELON*** YAMS
<u>VINE CROPS</u> GRAPES	KIWI FRUIT				
FORAGE CROPS AND ALFALFA*	<u>D LEGUMES</u> FORAGE GRASSES*	FORAGE LEGUMES*			
TROPICAL CROPS ACEROLA ATEMOYA AVOCADO BANANA (PLAINTAINS) BREADFRUIT	CANISTEL CARAMBOLA CHERIMOYA COCOA BEANS COFFEE DATES	FIGS GENIP GUAVA JABOTICABA JACKFRUIT LONGAN	LYCHEE MANGO PAPAYA PASSION FRUIT PERSIMMONS PINEAPPLE****	POMEGRANATE SAPODILLA SAPOTE (BLACK, MAMEY, WHITE) SOURSOP	SUGAR APPLE TAMARIND TEA
BULB VEGETABLES GARLIC*** GREAT-HEADED GARLIC***	LEEK ONION (DRY BULB AND GREEN)	WELSH ONION SHALLOT			
HERBS AND SPICES ALLSPICE ANGELICA STAR ANISE ANNATTO (SEED) BALM BASIL BORAGE BURNET CAMOMILE CAPER BUDS CARAWAY BLACK CARAWAY CARDAMOM CASSIA BARK CASSIA BUDS	CATNIP CELERY SEED CHERVIL (DRIED) CHIVE CHINESE CHIVE CINNAMON CLARY CLOVE BUDS CORIANDER LEAF (CILANTRO OR CHINESE PARSLEY) CORIANDER SEED (CILANTRO) COSTMARY	CULANTRO (LEAF) CULANTRO (SEED) CUMIN CURRY (LEAF) DILL (DILLWEED) DILL (SEED) EPAZOTE FENNEL SEED (COMMON AND FLORENCE) FENUGREEK WHITE GINGER FLOWER GRAINS OF PARADISE	HOREHOUND HYSSOP JUNIPER BERRY LAVENDER LEMONGRASS LOVEAGE (LEAF AND SEED) MACE MARIGOLD MARJORAM (INCLUDING OREGANO) MEXICAN OREGANO MIOGA FLOWER	MUSTARD (SEED) NASTURTIUM NUTMEG PARSLEY (DRIED) PENNYROYAL PEPPER (BLACK AND WHITE) PEPPER LEAVES PEPPERMINT* PERILLA POPPY (SEED) ROSEMARY RUE SAFFRON SAGE	SAVORY (SUMMER WINTER) SPEARMINT* STEVIA LEAVES SWEET BAY TANSY TARRAGON THYME VANILLA WINTERGREEN WOODRUFF WORMWOOD
OIL SEED CROPS BORAGE BUFFALO GOARD (SEED)	CANOLA CRAMBE FLAX (SEED)	JOJOBA LESQUERELLA	MEADOWFOAM SUNFLOWER****	MUSTARD (SEED) RAPE (SEED)	SAFFLOWER SESAME

- \* Spot treatments may be applied in these crops.
- \*\* Do not treat rice fields or levees when the fields contain flood water.
- \*\*\* Apply only prior to planting. Allow at least 3 days between application and planting. \*\*\*\* Do not feed or graze treated pineapple or sunflower forage following application.
- † Use is restricted to direct seeded crops only.

When applying this product prior to transplanting crops into plastic mulch, care must be taken to remove residues of this product from the plastic prior to transplanting. Residues can be removed by 0.5 inch natural rainfall or by applying water via a sprinkler irrigation system.

**Spot Treatment** (Only those crops with "\*" can be spot treated.) – Applications in growing crops must be made prior to heading of small grains and milo, initial pod set in soybeans, silking of corn, or boll opening on cotton.

For forage grasses and forage legumes see "SPOT TREATMENT" in the "PASTURES" section of "CROPPING SYSTEMS" in this label. For dilution and rates of application using boom or hand-held equipment, see "MIXING, ADDITIVES AND APPLICATION INSTRUCTIONS" and "WEEDS CONTROLLED" sections of this label.

NOTE: FOR FORAGE GRASSES AND FORAGE LEGUMES, NO MORE THAN ONE-TENTH OF ANY ACRE SHOULD BE TREATED AT ONE TIME. FOR ALL OTHER CROPS, DO NOT TREAT MORE THAN 10 PERCENT OF THE TOTAL FIELD AREA TO BE HARVESTED. THE CROP RECEIVING SPRAY IN TREATED AREA WILL BE KILLED. TAKE CARE TO AVOID DRIFT OR SPRAY OUTSIDE TARGET AREA FOR THE SAME REASON.

**Selective Equipment** – This product may be applied through recirculating sprayers, shielded applicators or wiper applicators in cotton and soybeans. Shielded and wiper applicators may also be used in tree crops and grapes. Wiper applicators may be used in wheat, rutabagas, forage grasses and forage legumes, including pasture sites and grain sorghum (milo).

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

Allow at least the following time intervals between application and harvest:

Cotton, Soybeans	7 days				
Apples, Citrus, Pear	1 day				
Atemoya, Avocado, Breadfruit, Canistel, Carambola, Cherry, Grapes, Dates, Jaboticaba, Jackfruit, Longan, Lychee, Passion Fruit, Persimmons, Rutabagas, Sapodilla, Sapote, Soursop, Sugar Apple, Tamarind					
Stone Fruit	17 days				
Nut Crops	3 days				
Wheat <sup>1</sup>	35 days				
Sorghum (milo) <sup>1,2</sup>	40 days				

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

# **ASPARAGUS**

When applied as directed for "CROPPING SYSTEMS" under the conditions described, this product controls weeds listed on this label in asparagus.

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

**Prior to Crop Emergence** – Apply this product prior to crop emergence for the control of emerged labeled annual and perennial weeds. DO NOT APPLY WITHIN A WEEK BEFORE THE FIRST SPEARS EMERGE.

**Spot Treatment –** Apply this product immediately after cutting, but prior to the emergence of new spears. Do not treat more than 10 percent of the total field area to be harvested. Do not harvest within 5 days of treatment.

**Postharvest** – Apply this product after the last harvest and all spears have been removed. If spears are allowed to regrow, delay application until ferns have developed. Delayed treatments should be applied as directed or shielded spray in order to avoid contact of the spray with ferns, stems or spears. Direct contact of the spray with the asparagus may result in serious crop injury.

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

#### BERRIES AND SMALL FRUITS

Wiper applicators may be used in cranberries in accordance with instructions in this section.

For other berries, apply as a preplant broadcast application, or as a directed spray or wiper application post-planting.

See "PRODUCT INFORMATION" and "MIXING, ADDITIVES AND APPLICATION INSTRUCTIONS" sections of this label for essential product performance information.

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

Allow a minimum of 30 days between last application and harvest of cranberries. For other small fruits and berries, allow a minimum of 14 days between last application and harvest.

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

For Wick or other Wiper Applicators - Mix 1 gallon of this product in 4 gallons of water to prepare a 20 percent solution.

In severe infestations, reduce equipment ground speed to ensure that adequate amounts of this product are wiped on the weeds. A second treatment in the opposite direction may be beneficial.

Do not permit herbicide solution to contact desirable vegetation, including green shoots, canes or foliage.

# **CEREAL GRAIN CROPS**

LABELED CROPS: Barley, Buckwheat, Millet (Pearl and Proso), Oats, Rice, Rye, Quinoa, Teff, Teosinte, Triticale, Wheat (all types), Wild Rice

TYPES OF APPLICATION: Chemical Fallow, Preplant, Fallow Beds, At-Planting, Preemergence, Hooded Sprayer in Row Middles, Shielded Sprayer in Row Middles, Wiper Applicator in Row Middles, Post Harvest plus Red Rice Control Prior to Planting Rice, Spot Treatment (except rice), Control of Barnyardgrass in Rice Using Renovation Treatment (California only), Wiper Applicator (feed barley and wheat only), Preharvest (feed barley and wheat only)

# Preplant, At Planting, Preemergence

USE INSTRUCTIONS This product may be applied before during or after the planting of cereal crops but prior to crop emergence.

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

USE INSTRUCTIONS: Flush fields prior to application to obtain uniform germination and stand of red rice and then apply 1.5 quarts of this product in 5 to 10 gallons of water per acre when the majority of the red rice plants are at the 2 leaf stage and no more than 4 inches tall. Red rice plants with less than 2 true leaves might only be partially controlled. Avoid spraying during conditions of low humidity as reduced control of red rice could result.

RESTRICTIONS: Do not apply this product to rice fields or levees when fields contain floodwater. Do not flood fields for a minimum of 8 days following application.

# **Spot Treatment (Except Rice)**

USE INSTRUCTIONS: This product may be applied as a spot treatment in cereal crops except rice. Apply before heading in small grains.

RESTRICTIONS: Do not apply this product to more than 10 percent of the total field area to be harvested.

# Control of Barnyardgrass in Rice Using Renovation Treatment (California Only)

THIS APPLICATION FOR USE IN CALIFORNIA ONLY.

USE INSTRUCTIONS: This product may be applied as a renovation treatment in rice crops to control barnyardgrass (*Echinochloa crus galli*) infestations using ground broadcast application equipment or a handheld sprayer. Renovation is defined as an herbicide application that will result in crop and weed destruction in an entire field or contiguous area treated within a field.

RESTRICTIONS: The rice straw and stubble from the application area including a 25-foot buffer zone on all sides may not be used for animal bedding grazing or any other feed purposes. DO NOT make this application using aerial application equipment.

# Wiper Applicator (Feed Barley and Wheat Only)

USE INSTRUCTIONS: This product may be applied over the top of feed barley and wheat using a wiper applicator to control tall weeds. To control common rye or cereal rye apply after weeds have headed and achieved maximum growth. See additional instructions on the use of wiper applicators in the "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label.

RESTRICTIONS Allow a minimum of 35 days between application and harvest Do not use roller applicator.

# **Preharvest (Feed Barley and Wheat Only)**

USE INSTRUCTIONS: This product provides weed control when applied prior to harvest of feed barley or wheat. For feed barley apply after the hard-dough stage when grain moisture is 20 percent or less. For wheat apply after the hard dough stage when grain moisture is 30 percent or less. Stubble may be grazed immediately after harvest. Apply this product in 10 to 20 gallons of water per acre when using ground application equipment and in 3 to 10 gallons of water per acre when using aerial application equipment.

RESTRICTIONS: Do not apply more than 1 quart of this product per acre for preharvest application. Allow a minimum of 7 days between application and harvest or grazing.

# Post-Harvest

USE INSTRUCTIONS: This product may be applied for weed control after harvest of cereal crops. Higher rates might be required to control large weeds that were growing in the field at the time of harvest. Tank mixtures with 2,4-D or dicamba may be used. Ensure that the product used is labeled for weed control following harvest of cereal crops. Read and follow label directions for all products in the tank mixture.

RESTRICTIONS: Allow a minimum of 7 days between application and harvest or feeding of vegetation within the application area. Application must be made a minimum of 30 days prior to the planting of any crop not listed on this label.

# **CORN**

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

TYPES OF APPLICATIONS: Preplant, preemergence, at-planting, hooded sprayers, spot treatment, preharvest, post-harvest.

{Add an agriculturally approved nonionic surfactant at 0.375 percent by volume of spray solution.} Adding 1 to 2 percent by weight of dry ammonium sulfate (or equivalent from other formulations) may increase the performance of this product.

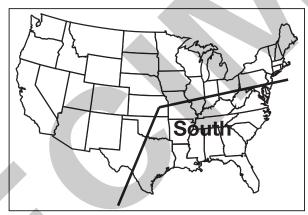
**Preplant, Preemergence and At-planting –** This product may be applied before, during or after planting corn. Applications must be made prior to emergence of the crop.

Subject to any limitations stated on labeling of specific products, the following tank mixtures may be applied before, during or after planting in conventional tillage systems, into a cover crop, established sod or in previous crop residue. Apply these tank mixtures in 10 to 20 gallons of water or 10 to 60 gallons of nitrogen solution per acre.

ATRAZINE **DUAL®** LARIAT® PROWL® / Pendimethalin BANVEL® / Dicamba **DUAL II** LASSO® / Alachlor SIMAZINE SURPASS® / Acetochlor **BICEP® EXTRAZINE®** LINEX® LOROX®/ Linuron SURPASS 100 BICEP II **FRONTIER®** BLADEX® / Cyanazine GUARDSMAN® MARKSMAN® TOPNOTCH® Atrazine + Dicamba **BROADSTRIKE®** HARNESS® / Acetochlor

BULLET® HARNESS XTRA MICRO-TECH®
CLASH® HARNESS XTRA 5.6L PARTNER®

This product may be tank-mixed with the listed herbicides provided the specific product is registered for use on these sites.



For Southern states (see map as a guide), do not apply in nitrogen solutions to tough-to-control grasses such as barnyardgrass, fall panicum, broadleaf signalgrass, annual ryegrass and any perennial weeds.

For improved burndown, this product may be tank mixed with 2,4-D (Weedar<sup>®</sup>, Weedone<sup>®</sup> and others) or dicamba.

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

Do not plant corn until at least 7 days after application of 2,4-D or dicamba.

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

**Hooded Sprayers** – This product may be used through hooded sprayers for weed control between the rows of corn. Only hooded sprayers that completely enclose the spray pattern may be used.

A hooded sprayer is a type of shielded applicator. The spray pattern is completely enclosed on the top and all 4 sides by a hood, thereby shielding the crop from the spray solution. This equipment must be set up and operated in a manner that avoids bouncing or raising the hoods off the ground in any way. If the hoods are raised, spray particles may escape and come into contact with the crop, causing damage or destruction of the crop. The spray hoods must be operated on the ground or skimming across the ground. Tractor speed must be adjusted to avoid bouncing of the spray hoods. Avoid operation on rough or sloping ground where the spray hoods might be raised off the ground.

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

Follow these requirements:

- The spray hoods must be operated on the ground or skimming across the ground.
- Do not apply more than 1 quart of this product per acre per application.
- Corn must be at least 12 inches tall, measured without extending leaves.
- Leave at least an 8 inch untreated strip over the drill row. For example, if the crop row width is 38 inches, the maximum width of the spray hood should be 30 inches.
- Maximum tractor speed: 5 mph.
- Maximum wind speed: 10 mph.
- Use low-drift nozzles.

Crop injury may occur when the foliage of treated 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.

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.

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

Do not graze or feed corn forage or fodder following applications of this product through hooded sprayers.

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

**Spot treatment -** For spot treatments, apply this product prior to silking of corn.

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

**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). For ground applications, apply up to 3 quarts of this product per acre. For aerial applications, apply up to 1 quart of this product per acre.

Allow a minimum of 7 days between application and harvest. Do not treat corn grown for seed preharvest, because a reduction in germination or vigor may result.

**Post-harvest** – This product may be applied after harvest of corn. Higher specified 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.

Do not harvest or feed treated vegetation for 8 weeks following application.

Read the "Limit of Warranty and Liability" in this label booklet for this product before using. For over-the-top uses on Roundup Ready® crop varieties, crop safety and weed control performance are not warranted by manufacturer when this product is used in conjunction with "brown bag" or "bin-run" seed saved from previous year's production and replanted. If these terms are not acceptable, return the product unopened at once.

# **FALLOW AND REDUCED TILLAGE SYSTEMS**

FOR AERIAL APPLICATION IN CALIFORNIA. REFER TO SUPPLEMENTAL LABEL.

Use this product in fallow and reduced tillage systems for control of annual weeds prior to emergence of crops listed in this label. Refer to the "WEEDS CONTROLLED" section of this label for specific rates and instructions. This product may be applied using ground or aerial spray equipment. See the "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label for instructions.

# TANK MIXTURES

Razor Herbicide <u>plus</u> Clash, Banvel or dicamba {<u>plus</u> Nonionic Surfactant}
Razor Herbicide <u>plus</u> 2,4-D {<u>plus</u> Nonionic Surfactant}
Razor Herbicide <u>plus</u> Goal {<u>plus</u> Nonionic Surfactant}

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

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

The addition of Clash, Banvel or dicamba in a mixture with this product may provide short-term residual control of selected weed species. Some crop injury may occur if Banvel or dicamba is applied within 45 days of planting. Refer to the Banvel, dicamba or 2,4-D labels for cropping restrictions and other use instructions.

This product may be tank-mixed with the listed herbicides provided the specific product is registered for use on these sites.

#### Razor Herbicide plus Goal Tank Mixtures

This product alone or in tank mixtures with Goal {plus 0.375 percent nonionic surfactant by total spray volume} will provide control of those weeds listed below.

Make applications when weeds are actively growing and at the recommended stages of growth. Avoid spraying when weeds are subject to moisture stress, when dust is on the foliage or when straw canopy covers the weeds.

Razor Herbicide 12 fluid oz / acre		Razor Herbicide 16 fluid oz / acre - Annual grasses at left plus:			
Wheat	18"	Ryegrass, annual	6"	Crabgrass	12"
Barley	12"	Chickweed	6"	Johnsongrass, seedling	12"
Bluegrass, annual	6"	Groundsel	6"	Lambsquarters	12"
Barnyardgrass	6"	Marestail	6"	Oats, wild	12"
Rye	6"	Rocket, London	6"	Pigweed, redroot	12"
		Shepherdspurse	6"	Mustards	12"

NOTE: Use 32 fluid ounces of this product per acre where heavy weed densities exist.

Razor Herbicide 12 fluid oz / acre + Goal** 2 to 4 fluid oz / a	cre	Razor Herbicide 16 fluid oz / acre + Goal** 2 to 4 fluid oz / acre	
Annual grasses above plus:		Annual weeds above plus:	
Cheeseweed, common	3"	Cheeseweed, common	6"
Chickweed	3"	Groundsel	6"
Groundsel	3"	Chickweed	12"
Rocket, London	6"	Rocket, London	12"
Shepherdspurse	6"	Shepherdspurse	12"

NOTE: Use 32 fluid ounces of this product per acre in mixtures with 2 to 4 fluid ounces of Goal per acre where heavy weed densities exist.

These recommended tank mixtures may be applied using ground or aerial spray equipment. Refer to the "WEEDS CONTROLLED" section of this label for specific rates and instructions.

# **ECOFARMING SYSTEMS**

The use instructions made in this section are not registered for use in California.

The Ecofarming System consists of the following rotation: winter wheat, corn / sorghum, ecofallow.

Use the following tank mixtures for control of emerged annual weeds before planting corn or sorghum in the Ecofarming System.

Razor Herbicide at 16 to 20 fluid ounces per acre plus 2,4-D at 0.375 to 0.5 pound a.i. per acre plus Atrazine at 0.75 to 1 pound a.i. per acre plus Lasso® at 2.5 to 3 quarts per acre

The above tank mixture should be applied in 28-0-0 or 32-0-0 liquid fertilizer carrier at 20 to 30 gallons per acre. The liquid fertilizer may be diluted with water to achieve the desired carrier volume.

This product may be tank-mixed with the listed herbicides provided the specific product is registered for use on these sites.

WEEDS CONTROLLED - The following weeds, up to a maximum height of 4 inches, will be controlled:

Foxtail, yellow Brome, downy Pigweed, redroot Bromus tectorum Amaranthus retroflexus Setaria lutescens Cheat Kochia\* Thistle, Russian Bromus secalinus Kochia scoparia Salsola kali Foxtail, green Lettuce, prickly Wheat, volunteer Lactuca serriola Triticum aestivum Setaria viridis

Refer to the label booklet for Lasso herbicide for preemergence weed control achieved by this tank mixture.

Refer to the specific product labels for crop rotation restrictions and cautionary statements for all products used in these tank mixtures.

<sup>\*</sup> Maximum height or length in inches.

<sup>\*\*</sup> Use the higher rate of Goal when weeds approach maximum recommended height or stands are dense.

<sup>\*</sup> For improved control of kochia, add 4 fluid ounces per acre (0.125 pound a.i. per acre) of Banvel or dicamba to the above tank mixture. Risk of crop injury from 2,4-D, Banvel or dicamba can be reduced by applying this treatment 7 to 14 days before planting.

# **AID TO TILLAGE**

This product, when used in conjunction with preplant tillage practices, will provide control of downy brome, cheat, volunteer wheat, tansy mustard and foxtail. Apply 8 fluid ounces of this product {plus 0.375 percent nonionic surfactant by total spray volume} in 3 to 10 gallons of water per acre. Make applications when weeds are actively growing and before they 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. Tank mixtures with residual herbicides may result in reduced performance.

# POSTHARVEST GRAIN SORGHUM, SORGHUM REGROWTH CONTROL

This product may be applied to grain sorghum (milo) stubble following harvest to suppress or control regrowth. Apply 1 quart of this product per acre for control, or 1.5 pints of this product per acre for suppression. Apply this product {plus 0.375 percent nonionic surfactant by total spray volume} in 3 to 10 gallons of spray solution per acre.

#### **PASTURES**

Apply this product prior to planting forage grasses and legumes.

Pasture or Hay Crop Renovation – When applied as a broadcast spray, this product controls the annual and perennial weeds listed in this label prior to planting forage grasses or legumes. Remove domestic livestock before application and wait 8 weeks after application before grazing or harvesting.

**Spot Treatment** – When applied as a spot treatment as specified, this product controls annual and perennial weeds listed in this label which are growing in pastures, forage grasses and forage legumes composed of bahiagrass, bermudagrass, bluegrass, brome, fescue, orchardgrass, ryegrass, timothy, wheatgrass, alfalfa or clover.

**Wiper Application –** When applied as directed, this product controls or suppresses the weeds listed under "WIPER APPLICATORS" in the "SELECTIVE EQUIPMENT" section of this label.

For spot treatment and wiper application, apply in areas where the movement of domestic livestock can be controlled. No more than one-tenth of any acre should be treated at one time. Further applications may be made in the same area at 30-day intervals. Remove domestic livestock before application and wait 14 days after application before grazing livestock or harvesting.

# **SUGARCANE**

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

NOTE: Where repeat treatments are necessary, do not exceed a total of 10.6 quarts of this product per acre per year. Do not apply to vegetation in or around ditches, canals or ponds containing water to be used for irrigation.

Broadcast Treatment - Apply this product in 10 to 40 gallons of water per acre on emerged weeds prior to the emergence of plant

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

For removal of last stubble or ration cane, apply 4 to 5 quarts of this product in 10 to 40 gallons of water per acre to new growth having at least 7 or more new leaves. Allow 7 or more days after application before tillage.

**Spot Treatment in or Around Sugarcane Fields** – For dilution and rates of application using hand-held equipment, see "MIXING, ADDITIVES AND APPLICATION INSTRUCTIONS" and "WEEDS CONTROLLED" sections of this label.

For control of volunteer or diseased sugarcane, make a 1 percent solution of this product in water and spray to wet the foliage of vegetation to be controlled.

NOTE: When spraying volunteer or diseased sugarcane, the plants should have at least 7 new leaves.

Avoid spray contact with healthy cane plants since severe damage or destruction may result. Do not feed or graze treated sugarcane forage following application.

# CONSERVATION TILLAGE, MINIMUM TILLAGE AND NO-TILL SYSTEMS CORN AND SOYBEANS TANK MIXTURES

The use instructions in this section are not registered for use in California.

When applied as instructed under the conditions described, the tank mixtures listed in this section control many emerged weeds, and give preemergence control of many annual weeds where corn or soybeans will be planted directly into a cover crop, established sod or in previous crop residues.

Refer to specific product labels for crop rotation restrictions and precautionary statements of all products used in these tank mixtures. For mixing instructions, see the "MIXING, ADDITIVES AND APPLICATION INSTRUCTIONS" section of this label.

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

{When tank mixing with residual herbicides, add an agriculturally approved nonionic surfactant at 0.375 percent by volume of spray solution.} The addition of 1 to 2 percent dry ammonium sulfate by weight may increase the performance of this product.

NOTE: When using these tank mixtures, do not exceed 4 quarts of this product per acre.

#### SOYBEANS

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

CANOPY PROWL® SENCOR® **GEMINI®** LOROX® PLUS **CLOAK®** LASSO® / ALACHLOR MICRO-TECH® **PURSUIT®** SQUADRON® COMMAND® LEXONE® TURBO® PARTNER® PURSUIT PLUS® **DUAL®** LINURON® **PREVIEW®** SCEPTER®

For improved burndown, this product may be tank-mixed with the following herbicides:

This product may be tank-mixed with the listed herbicides provided the specific product is registered for use on these sites.

- 2 4-DB
- 2,4-D\* (WEEDONE® 638, WEEDAR® 64, others)

#### **CORN AND SOYBEANS**

**Annual Weeds –** For difficult-to-control weeds such as fall panicum, barnyardgrass, crabgrass, shattercane and broadleaf signalgrass up to 2 inches tall, and Pennsylvania smartweed up to 6 inches tall, apply this product at 2 pints per acre in these tank mixtures. For other labeled annual weeds, apply 1 to 1.5 pints of this product per acre when weeds are less than 6 inches tall, and 2 to 3 pints when weeds are over 6 inches tall. For a complete list of annual weeds controlled, see the "WEEDS CONTROLLED" section of this label.

**Perennial Weeds** – At normal application times in minimum tillage systems, perennial weeds may not be at the proper stage of growth for control. See the "WEEDS CONTROLLED" section of this label for the proper stage of growth for perennial weeds.

Use of 2 to 4 quarts of this product per acre in the tank mixtures mentioned above, under these conditions provides top kill and reduces competition from many emerged perennial grass and broadleaf weeds. For emerged perennial weeds controlled, see the "WEEDS CONTROLLED" section of this label.

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

## CORN

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

ATRAZINE CYANAZINE LASSO® / ALACHLOR PROWL® or pendimethalin

BICEP® DUAL® MICRO-TECH® SIMAZINE

BULLET® LARIAT® PARTNER®\*

For improved burndown, this product may be tank-mixed with 2,4-D or dicamba. Applications of 2,4-D or dicamba must be made at least 7 days prior to planting corn. See the "WEEDS CONTROLLED" section for specific rate information.

DO NOT USE TANK MIXTURES FOR BERMUDAGRASS OR JOHNSONGRASS CONTROL IN MINIMUM TILLAGE SYSTEMS. For bermudagrass control, follow the instructions under "CONTROL OF PERENNIAL WEEDS" section of this label and then use a label-approved, seedling weed-control program in a minimum tillage or conventional tillage system. For Johnsongrass control, follow instructions under "CONTROL OF PERENNIAL WEEDS" section of this label, and then use a label-approved, seedling weed-control program with conventional tillage.

## PREHARVEST APPLICATIONS ON ALFALFA COTTON, GRAIN SORGHUM, SOYBEANS AND WHEAT

When applied as directed under the conditions described, this product controls annual and perennial weeds listed on this label prior to the harvest of cotton, grain sorghum, soybeans and wheat.

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

This product may be applied by both ground and aerial application equipment. DO NOT APPLY MORE THAN 1 QUART PER ACRE OF THIS PRODUCT BY AIR. See the "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label for instructions for ground and aerial applications.

NOTE: Do not apply to crops grown for seed unless the likelihood of a reduction in germination and/or vigor is acceptable. Reduction in germination or vigor may occur.

The use of this product for preharvest grain sorghum (Milo) is not registered in California.

<sup>\*</sup> See the label for 2,4-D for intervals between application and planting.

<sup>\*</sup> Partner herbicide is not registered in California.

#### **SOYBEANS**

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

RESTRICTIONS: Do not apply more than 5 quarts of this product per acre for preharvest application using ground application equipment or more than 66 fluid ounces per acre when making the application using aerial application equipment. Allow a minimum of 7 days between application and harvest of soybean. If the preharvest application rate is greater than 33 fluid ounces per acre do not graze or harvest hay or fodder within the application area for livestock feed within 25 days of application. If the application rate is 33 fluid ounces per acre or less the grazing restriction is reduced to 14 days after application.

## **ALFALFA**

This product may be used in declining alfalfa stands or any stand of alfalfa where crop destruction is acceptable. This application will severely injure or destroy the stand of alfalfa. The application rate of 2 quarts per acre will control most annual and perennial weeds, including quackgrass, when applied prior to the harvest of alfalfa.

The treated crop can be harvested and fed to livestock after 36 hours. Allow a minimum of 36 hours between application and harvest. For best results, harvest within 7 days of spraying.

Applications may be made at any time of year. Make only one preharvest application to an existing stand of alfalfa per year. For control of quackgrass, apply in the spring, late summer or fall when quackgrass is actively growing and at the proper growth stage (6 to 8 inches or more in height). Treatments for quackgrass must be followed by deep tillage for complete control.

DO NOT APPLY MORE THAN 2 QUARTS OF THIS PRODUCT PER ACRE AS A PREHARVEST TREATMENT TO ALFALFA.

#### COTTON

**Broadcast Applications** – This product may be applied using either aerial or ground spray equipment. For ground applications with broadcast equipment, 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.

This product provides weed control and cotton regrowth inhibition when applied prior to the harvest of cotton. Apply 1 to 2 quarts of this product in 3 to 10 gallons of water per acre for cotton regrowth inhibition. Do not apply more than 2 quarts of this product per acre for preharvest applications. THE USE OF ADDITIVES FOR PREHARVEST APPLICATION TO COTTON IS PROHIBITED.

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

Allow a minimum of 7 days between application and harvest of cotton.

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

Do not feed or graze treated cotton forage or hay following preharvest applications.

## **GRAIN SORGHUM (MILO)**

Make applications at 30% grain moisture or less and at least 7 days prior to harvest.

Apply up to 2 quarts of this product per acre.

#### WHEAT

Apply after the hard-dough stage of grain (30% or less grain moisture) and at least 7 days prior to harvest.

DO NOT APPLY MORE THAN 1 QUART PER ACRE OF THIS PRODUCT FOR PREHARVEST APPLICATIONS TO WHEAT.

## PREHARVEST (FEED BARLEY AND WHEAT ONLY)

USE INSTRUCTIONS: This product provides weed control when applied prior to harvest of wheat or feed barley. For wheat, apply after the hard-dough stage of grain (30 percent 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.

RESTRICTIONS: Do not apply more than 1 quart of this product per acre. Allow 7 days between application and harvest, feeding or grazing. Do not make preharvest application for wheat or barley grown for seed, as a reduction in germination or vigor may occur.

# PREHARVEST AND SPOT TREATMENTS OF WEEDS IN DRY PEAS, LENTILS, AND CHICKPEAS

#### **BROADCAST SPRAY**

This product may be applied as an over-the-top broadcast spray to control labeled weeds prior to the harvest of dry peas, lentils, and chickpeas. Apply up to 24 fluid ounces in 3 to 20 gallons of water per acre at the hard dough stage of the legume seed (30 percent grain moisture or less). Either ground broadcast or aerial applications may be made.

#### **RESTRICTIONS:**

- Apply at least 14 days before harvest.
- Only one application per year may be made; do not combine a preharvest spray with a spot treatment on the same crop area.
- Employ at least a 30 day plant-back interval between treatment and replanting for any crop not listed in this product's label.
- Do not apply preharvest for peas, lentils, or chickpeas grown for seed, as a reduction in germination or vigor may occur.
- Do not feed treated vines and hay from these crops to livestock. Do not apply this product through any type of irrigation system.
- Do not treat field (feed) peas, since these are considered to be grown as livestock feed.

#### SPOT TREATMENTS

This product may be applied as a spot treatment to control troublesome weeds such as Canada thistle, quackgrass, mayweed (dog fennel), and milkweed in dry peas, lentils, and chickpeas. Apply up to 20 fluid ounces in 10 to 20 gallons of water through ground spray equipment or use a 2 percent solution in a handheld sprayer. For best results, applications should be made at or beyond the bud stage of growth. The crop receiving spray in treated areas will be killed.

#### RESTRICTIONS:

- Apply at least 14 days before harvest.
- Only one application per year may be made; do not combine a preharvest spray with a spot treatment on the same crop area.
- Employ at least a 30 day plant-back interval between treatment and replanting for any crop not listed in this product's label.
- Do not feed treated vines and hay from these crops to livestock. Do not apply this product through any type of irrigation system.
- Do not treat field (feed) peas, since these are considered to be grown as livestock feed.

## PREHARVEST AND SPOT TREATMENTS OF WEEDS IN DRY BEANS

#### **BROADCAST SPRAY**

This product may be applied as an over-the-top broadcast spray to control labeled weeds prior to the harvest of dry beans. Apply up to 32 fluid ounces in 3 to 20 gallons of water per acre at the hard dough stage of the legume seed (30 percent grain moisture or less). Either ground broadcast or aerial applications may be made.

#### RESTRICTIONS:

- Apply at least 7 days before harvest.
- Only one application per year may be made; do not combine a preharvest spray with a spot treatment on the same crop area.
- Employ at least a 30 day plant-back interval between treatment and replanting for any crop not listed in this product's label.
- Do not apply preharvest for dry beans grown for seed, as a reduction in germination or vigor may occur.
- Do not feed treated vines and hay from these crops to livestock. Do not apply this product through any type of irrigation system.
- Do not treat field cowpeas, since these are considered to be grown as livestock feed.

## **SPOT TREATMENTS**

This product may be applied as a spot treatment to control troublesome weeds such as Canada thistle, quackgrass, mayweed (dog fennel), and milkweed in dry beans. Apply up to 26 fluid ounces in 10 to 20 gallons of water through ground spray equipment or use a 2 percent solution in a handheld sprayer. For best results, applications should be made at or beyond the bud stage of growth. The crop receiving spray in treated areas will be killed.

## **RESTRICTIONS:**

- Apply at least 14 days before harvest.
- Only one application per year may be made; do not combine a preharvest spray with a spot treatment on the same crop area.
- Employ at least a 30 day plant-back interval between treatment and replanting for any crop not listed in this product's label.
- Do not feed treated vines and hay from these crops to livestock. Do not apply this product through any type of irrigation system.
- Do not treat field (feed) peas, since these are considered to be grown as livestock feed.

## TREE AND VINE CROPS

This product may be used for weed control in established groves, vineyards, and orchards, or for site preparation prior to transplanting crops listed in this section. Applications may be made with boom equipment, CDA, shielded sprayers, hand-held and high-volume wands, lances, orchard guns or with wiper applicator equipment, except as directed in this section. See the "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label for specific information on use of equipment.

When applying this product, refer to the "WEEDS CONTROLLED" section of this label and to specific directions in this section for rates to be used.

#### NOTE

Repeat treatments may be necessary to control weeds originating from underground parts of untreated weeds or from seeds. This product does not provide residual weed control. For subsequent weed control, use repeated applications of this product. Do not apply more than 10.6 quarts of this product per acre per year.

EXTRÊME 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 OR VINES. CONTACT OF THIS PRODUCT WITH OTHER THAN MATURED BROWN BARK CAN RESULT IN SERIOUS CROP DAMAGE.

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

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

For specific rates of applications and instructions, see the "WEEDS CONTROLLED" section of this label, and to specific directions which follow.

## **MIDDLES MANAGEMENT**

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

For citrus crops, treat uniformly between trees.

## Razor Herbicide Razor Herbicide plus Goal

This product alone or in mixtures with Goal will control or suppress the annual weeds listed below.

Apply the specified rates of this product, either alone or in mixtures with Goal {plus 0.375 percent nonionic surfactant by spray volume} in 3 to 10 gallons of water per acre. Apply when weeds are actively growing and less than 6 inches in height or diameter. If weeds are under drought stress, irrigate prior to application. Reduced control may occur if weeds have been mowed prior to application.

Up to 48 fluid ounces per acre of this product may be used to control weeds, which have been mowed, are stressed or are growing in dense populations.

WEED SPECIES	MAXIMUM HEIGHT / DIAMETER (INCHES)	RATE PER ACRE Razor Herbicide (FLUID OUNCES)		GOAL (FLUID OUNCES)
Barley Hordeum vulgare	6	8		_
Bluegrass, annual Poa annua				
Barnyardgrass Echinochloa crus-galli	6	12		_
Chickweed, common Stellaria media				
Red Maids Calandrinia ciliata				
Crabgrass Digitaria spp.	6	16		_
Fleabane, hairy Conyza bonariensis			or	
Groundsel, common Senecio vulgaris				
Junglerice Echinochloa colonum		16 to 32	+	4 to 16**
Lambsquarters, commo Chenopodium album	n			
Pigweed, redroot  Amaranthus retroflexus				
Rocket, London Sisymbrium irio				
Ryegrass, common Lolium multiflorum				
Shepherdspurse Capsella bursa-pastoris				
Sowthistle, annual Sonchus oleraceus				

WEED SPECIES	MAXIMUM HEIGHT / DIAMETER (INCHES)	RATE PER ACRE Razor Herbicide (FLUID OUNCES)		GOAL (FLUID OUNCES)
Cheeseweed, common Malva spp.	3	12 to 32	+	4 to 16
Cheeseweed, common Malva spp.	6	16 to 32	+	4 to 16
Filaree*  Erodium spp.				
Horseweed / Marestail Conyza canadensis				
Nettle, stinging Urtica dioica				
Purslane, common* Portulaca oleracea				

<sup>\*</sup>Suppression only.

#### **STRIPS**

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

#### TANK MIXTURES WITH RESIDUAL HERBICIDES

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

Razor Herbicide <u>plus</u> Goal 2XL
Razor Herbicide <u>plus</u> Karmex® DF
Razor Herbicide <u>plus</u> Krovar I Razor Herbicide <u>plus</u> Krovar II
Razor Herbicide <u>plus</u> Princep Caliber 90
Razor Herbicide <u>plus</u> Simazine 4L, 80W or 90DF
Razor Herbicide <u>plus</u> Solicam® 80DF
Razor Herbicide plus Surflan AS or 75W

Razor Herbicide <u>plus</u> Princep Caliber 90, Simazine 4L, 80W or 90DF <u>plus</u> Surflan AS or 75W Razor Herbicide <u>plus</u> Goal 2XL <u>plus</u> Surflan AS or 75W

Razor Herbicide <u>plus</u> Goal 2XL <u>plus</u> Princep Caliber 90, Simazine 4L, 80W or 90DF
Razor Herbicide <u>plus</u> Goal 2XL <u>plus</u> Surflan AS or 75W <u>plus</u> Princep Caliber 90, Simazine 4L, 80W or 90DF

Do not apply these tank mixtures in Puerto Rico.

{When tank-mixing with residual herbicides, add an agriculturally approved nonionic surfactant at 0.375 percent by volume of spray solution.}

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

Read and carefully observe the label claims, cautionary statements, rates and all other information on the labels of all products.

## **APPLICATION RATES**

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

**Perennial Weeds** – Apply 1 pint to 5 quarts per acre of this product in these tank mixtures to control or suppress perennial weeds. Follow the directions in the "WEEDS CONTROLLED" section of this label for stage of growth and application rates for specific perennial weeds.

#### Razor Herbicide plus Goal plus Simazine / Surflan

This product plus low rates of Goal in 3-way or 4-way mixtures with simazine and/or Surflan will provide postemergence control of the weeds listed below.

Refer to the individual simazine and Surflan labels for preemergence rates, weeds controlled, precautionary statements and other important information.

Apply these tank mixtures in 3 to 40 gallons of water. {Add 0.375 percent nonionic surfactant by total spray volume to the spray solution.}

<sup>\*\*</sup>The mixture of this product plus Goal is recommended when weeds are stressed or growing in dense populations.

Apply 1 to 5 quarts per acre of this product plus 4 to 48 fluid ounces per acre of Goal plus labeled rates of simazine and/or Surflan to control the following weeds:

Barley, wild Chickweed, common Groundsel, common Pineappleweed Shepherdspurse Matricaria Hordeum leporinum Stellaria media Senecio vulgaris Capsella bursa-pastoris matricarioides Bluegrass, annual Filaree\* Horseweed / Marestail Sowthistle, annual Poa annua Erodium spp. Conyza canadensis Rocket, London Sonchus oleraceus Sisymbrium irio Cheeseweed, common Fleabane, hairy Nettle, stinging Malva spp. Conyza bonariensis Urtica dioica

NOTE: This recommendation does not preclude the use of Goal in these mixtures at higher, labeled rates for preemergence weed control.

## PERENNIAL GRASS SUPPRESSION ON ORCHARD FLOORS

When applied as directed, this product will suppress vegetative growth as indicated below.

#### <u>Bahiagrass</u>

This product will provide significant inhibition of seedhead emergence and will suppress vegetative growth for a period of approximately 45 days with a single application and approximately 120 days with sequential applications. Apply this product 1 to 2 weeks after full green-up or after mowing to a uniform height of 3 to 4 inches. Applications must be made prior to seedhead emergence. Apply 6 fluid ounces of this product {plus 0.375 percent nonionic surfactant by total spray volume} in 10 to 25 gallons of water per acre.

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

#### **Bermudagrass**

For burndown, apply 1 to 2 quarts of this product {plus 0.375 percent nonionic surfactant by total spray volume} in 3 to 20 gallons of water per acre. Use 1 quart of this product in 3 to 20 gallons of water per acre east of the Rocky Mountains. Use 1 to 2 quarts of this product in 3 to 10 gallons of water per acre west of the Rocky Mountains. 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.

Suppression only (east of the Rocky Mountains) – Apply 6 to 16 fluid ounces of this product {plus 0.375 percent nonionic surfactant by total spray volume} in 3 to 20 gallons of water per acre no sooner than 1 to 2 weeks after full green-up. Mowing prior to application may occur provided a minimum height of 3 inches is maintained. Rates of 6 to 10 fluid ounces of this product {plus nonionic surfactant} should be used in shaded conditions or where a lesser degree of suppression is desired. Sequential applications may be made when regrowth occurs and bermudagrass injury and stand reduction can be tolerated.

Suppression only (west of the Rocky Mountains) – Apply 16 fluid ounces of this product {plus 0.375 percent nonionic surfactant by total spray volume} in 3 to 10 gallons of water per acre to bermudagrass up to 6 inches in height and no sooner than 1 to 2 weeks after full green-up. Mowing prior to application may occur provided a minimum height of 3 inches is maintained. Sequential applications may be made when regrowth occurs and bermudagrass injury and stand reduction can be tolerated.

## **Cool Season Grass Covers**

For suppression of tall fescue, fine fescue, orchardgrass and quackgrass, apply 8 fluid ounces of this product {plus 0.375 percent nonionic surfactant by total spray volume} in 10 to 20 gallons of water per acre. For best suppression, add ammonium sulfate to the spray solution at a rate of 2 percent by weight or 17 pounds per 100 gallons of spray solution.

For suppression of Kentucky bluegrass covers, apply 6 fluid ounces of this product {plus 0.375 percent nonionic surfactant}. Do not add ammonium sulfate.

For best results, mow cool-season grass covers in the spring to even their height and apply the specified rate of this product 3 to 4 days after mowing. Avoid treating cool season grass covers under poor growing conditions, such as drought stress (drip irrigation), disease or insect damage.

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

For burndown or control of the weeds listed, apply the specified rates of this product {plus 0.375 percent nonionic surfactant by total spray volume} in 3 to 30 gallons of water per acre. Where weed foliage is dense, use 10 to 30 gallons of water per acre.

## **Annual Weeds**

**Goatweed** – Apply 2 to 3 quarts per acre of this product plus 17 pounds of ammonium sulfate per 100 gallons of water {plus 0.375 percent nonionic surfactant by total spray volume}. Apply in 20 to 30 gallons of water per acre when plants are actively growing. Use 2 quarts per acre when plants are less than 8 inches tall and 3 quarts per acre when plants are greater than 8 inches. If goatweed is greater than 8 inches tall, the addition of Krovar II or Karmex may improve control. Use labeled rates for these residual products.

Read and carefully observe the label claims, cautionary statements, rates and all other information on the Krovar II and Karmex labels.

<sup>\*</sup>Use a minimum of 1.5 guarts of this product in these mixtures.

#### **Perennial Weeds**

Apply when weeds are actively growing and at the growth stages listed in the "PERENNIAL WEEDS CONTROLLED" section of this label. If perennial weeds are mowed, allow weeds to regrow to the recommended stage of growth.

S = Suppression B = Burndown

PC = Partial control C = Control

WEED	Razor Herbicide RATE PER ACRE			
SPECIES	1 qt	2 qts	3 qts	5 qts
Bermudagrass	В	•	PC	С
Guineagrass				
Texas and Florida Ridge	В	С	С	C
Florida Flatwoods	•	В	C	С
Paragrass	В	С	C	C
Torpedograss	S	•	PC	C

## TREE CROPS

Citrus\*\*\*\*\*: calamondin, chironja, citron, grapefruit, kumquat, lemon, lime, mandarin orange, orange, pummelo, tangelo, tangerine, tangors.

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

Pome Fruit\*\*\*\*: apple, loquat, mayhaw, pear, quince.

Stone Fruit\*\*\*: apricots, cherries, nectarines, olives, peaches, plums / prunes.

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

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

Any application equipment listed in this section may be used in apricots, nectarines, peaches and plums / prunes growing in Arizona, California, Colorado, Idaho, Kansas, Kentucky, New Jersey, North Dakota, Oklahoma, Oregon, Texas, Utah and Washington, except 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 which have been planted in the orchard for 2 or more years. EXTREME CARE MUST BE TAKEN TO ENSURE NO PART OF THE PEACH TREE IS CONTACTED.

#### **Tropical Fruit**

acerola*	carambola*	guava****	papaya*****	sugar apple*
atemoya*	cherimoya*	jaboticaba*	passionfruit*	tamarind*
avocado*	cocoa beans*	jackfruit*	persimmons*	tea*
banana*****	coffee****	longan*	pomegranate*	
(plantains)****	dates*	lychee*	sapodilla*	
breadfruit*	figs*	mango*	sapote*	
canistel*	genip*	mayhaw*	soursop*	

In coffee and banana, delay applications 3 months after transplanting to allow the new coffee or banana plant to become established.

#### NOTE

- \* Allow a minimum of 14 days between last application and harvest.
- \*\* Allow a minimum of 3 days between last application and harvest of these crops.
- \*\*\* Allow a minimum of 17 days between last application and harvest.
- \*\*\*\* Allow a minimum of 28 days between last application and harvest.
- \*\*\*\*\* Allow a minimum of 1 day between last application and harvest.

## **NON-FOOD TREE CROPS APPLICATIONS**

**Post-Directed, Spot Treatment, Trim and Edge Application:** This product may be used as a post-directed spray, spot treatment and trim and edge around established poplar, eucalyptus, Christmas trees and other non-food tree crops.

**Wiper Application:** This product may be used through wick or other suitable wiper applications to control or partially control undesirable vegetation around established eucalyptus and poplar trees.

#### **VEGETABLES**

THIS SECTION PROVIDES DIRECTIONS FOR USE THAT APPLY TO ALL VEGETABLE CROPS LISTED IN THE FOLLOWING SECTIONS SEE THE INDIVIDUAL CROP SECTIONS FOR SPECIFIC DIRECTIONS FOR USE PREHARVEST INTERVALS PRECAUTIONS AND RESTRICTIONS.

TYPES OF APPLICATION: Chemical Fallow, Preplant, Fallow Beds, At Planting, Preemergence, Prior to Transplanting Vegetables, Hooded Sprayer in Row Middles, Shielded Sprayer in Row Middles, Wiper Applicator in Row Middles, Directed Application (non-bearing ginseng only), Wiper Applicator (rutabaga only), Post-Harvest

PRECAUTIONS: This product could cause crop injury when applied prior to transplanting or direct seeding crops into plastic mulch. Remove residual product from the plastic prior to planting with a single 0.5 inch application of water either by natural rainfall or by irrigation. Ensure that the wash water flushes off the plastic mulch and does not enter the transplant holes. Application of this product at crop emergence will result in injury or death to emerged seedlings.

Avoid contact of this herbicide with foliage green shoots or stems bark exposed roots (including those emerging from the plastic mulch) or fruit of crops as severe crop injury or destruction could result. Transplanted seedlings coming into contact with freshly sprayed weeds could result in significant crop injury.

Preemergence application must be made before crop emergence to avoid severe crop injury. Apply before seed germination in coarse sandy soils to further minimize the risk of crop injury. In crops with vines make hooded sprayer shielded sprayer and wiper applications in row middles prior to vine development otherwise severe crop injury or destruction could result.

RESTRICTIONS: Unless otherwise directed on this label application using selective equipment including wiper applicators and hooded sprayers must be made a minimum of 14 days prior to harvest. Postharvest and fallow applications must be made a minimum of 30 days prior to the planting of any crop not listed on this label. See additional use instructions in the "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label.

## **Brassica Vegetables**

LABELED CROPS: Broccoli, Chinese broccoli (gai lon), Broccoli raab (rapini), Brussels sprouts, Cabbage, Chinese cabbage (bok choy), Chinese cabbage (napa), Chinese mustard cabbage (gai choy), Cauliflower, Cavalo broccoli, Collards, Kale, Kohlrabi, Mizuna, Mustard greens, Mustard spinach, Rape greens

#### **Bulb Vegetables**

LABELED CROPS: Garlic, Great headed garlic, Leek, Onion (dry bulb and green), Welsh onion, Shallot

## **Cucurbit Vegetables and Fruits**

LABELED CROPS: Chayote (fruit), Chinese waxgourd (Chinese preserving melon), Citron melon, Cucumber, Gherkin, Edible gourd (includes hyotan, cucuzza, hechima, Chinese okra), Melons (all), Momordica spp. (includes balsam apple, balsam pear, bittermelon, Chinese cucumber), Muskmelon (includes cantaloupe, casaba, crenshaw melon, golden pershaw melon, honeydew melon, honey ballmelon, mango melon, Persian melon, pineapple melon, Santa Claus melon, snake melon), Pumpkin, Summer squash (includes crookneck squash, scallop squash, straightneck squash, vegetable marrow zucchini), Winter squash (includes butternut squash, calabaza, hubbard squash, acorn squash, spaghetti squash), Watermelon

RESTRICTIONS: For cantaloupe, casaba melon, crenshaw melon, cucumber, gherkin, gourds, honeydew melon, honey ball melon, mango melon, melons (all), muskmelon, Persian melon, pumpkin squash (summer winter) and watermelon allow a minimum of 3 days between application and planting.

## **Leafy Vegetables**

LABELED CROPS: Amaranth (Chinese spinach), Arugula (roquette), Beet greens, Cardoon, Celery, Chinese celery, Celtuce, Chaya, Chervil, Edible-leaved chrysanthemum, Garland chrysanthemum, Corn salad, Cress (garden and upland), Dandelion, Dock (sorrel), Dokudami, Endive (escarole), Florence fennel, Gow kee, Lettuce (head and leaf), Orach, Parsley, Purslane (garden and winter), Radicchio (red chicory), Rhubarb, Spinach, New Zealand spinach, Vine spinach, Swiss chard, Watercress (upland), Water spinach

RESTRICTIONS: For watercress allow a minimum of 3 days between application and seeding. Do not apply this product during the period between seeding and emergence.

## **Fruiting Vegetables**

LABELED CROPS: Eggplant, Groundcherry, (*Physalis* spp.) Pepino, Pepper (includes bell pepper, chili pepper, cooking pepper, pimento, sweet pepper), Tomatillo, Tomato

RESTRICTIONS: Allow a minimum of 3 days between application and planting. For tomato and tomatillo do not apply this product using a hooded or shielded sprayer in row middles because of the potential for crop injury.

## **Root and Tuber Vegetables**

LABELED CROPS: Arracacha, Arrowroot, Chinese artichoke, Jerusalem artichoke, Beet (garden), Burdock, Canna, Carrot, Cassava (bitter and sweet), Celenac, Chayote (root), Chervil (turnip rooted), Chicory, Chufa, Dasheen (taro), Galangal, Ginger, Ginseng, Horseradish, Leren, Kava (turnip-rooted), Parsley (turnip rooted), Parsnip, Potato, Radish, Oriental radish, Rutabaga, Salsify, Black salsify, Spanish salsify, Skirret, Sweet potato, Tamer, Turmeric, Turnip, Wasabi, Yacon, Yam bean, True yam

#### **Directed Application (Non Bearing Ginseng Only)**

USE INSTRUCTIONS: This product may be applied for weed control in established non bearing ginseng using a boom sprayer CDA shielded sprayer wiper applicator handheld or backpack wand lance or orchard gun. Control the application so as not to allow any contact of this product with the ginseng plant. See additional use instructions in the "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label.

RESTRICTIONS: Application must be made a minimum of one year prior to harvest.

## Wiper Applicator (Rutabaga Only)

USE INSTRUCTIONS: A wiper applicator may be used over the top of rutabaga for the control of tall weeds. See additional use instructions for wiper applicators in the "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label.

RESTRICTIONS: Allow a minimum of 14 days between application and harvest of rutabaga.

#### VINE CROPS

## (Kiwi Fruit, Grapes, Hops and Passion Fruit)

This product may be used for weed control in established groves, vineyards, and orchards, or for site preparation prior to transplanting crops listed in this section. Applications may be made with boom equipment, CDA, shielded sprayers, hand-held and high-volume wands, lances, orchard guns or with wiper applicator equipment, except as directed in this section. See the "APPLICATION EQUIPMENT AND TECHNIQUES" section for specific information on use of equipment and directions. When applying this product, refer to the "WEEDS CONTROLLED" section and to specific directions in that section for rates to be used.

Any variety of table, wine or raisin grape may be treated with any equipment listed in this section. Applications should not be made when green shoots, canes, or foliage are in the spray zone. Allow a minimum of 14 days between last application and harvest.

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

## **HERBS AND SPICES**

(Allspice, Angelica, Star anise, Annatto (seed), Balm, Basil, Borage, Burnet, Chamomile, Caper buds, Caraway, Black caraway, Cardamom, Cassia bark, Cassia buds, Catnip, Celery seed, Chervil (dried), Chive, Chinese chive, Cinnamon, Clary, Clove buds, Coriander leaf (cilantro or Chinese parsley), Coriander seed (cilantro), Costmary, Culantro (leaf), Culantro (seed), Cumin, Curry (leaf), Dill (dillweed), Dill (seed), Epazote, Fennel seed (common and Florence), Fenugreek, White ginger flower, Grains of paradise, Horehound, Hyssop, Juniper berry, Lavender, Lemongrass, Lovage (leaf and seed), Mace, Marigold, Marjoram (including oregano), Mexican oregano, Mioga flower, Mustard (seed), Nasturtium, Nutmeg, Parsley (dried), Pennyroyal, Pepper (black and white), Pepper leaves, Peppermint, Perilla, Poppy (seed), Rosemary, Rue, Saffron, Sage, Savory (summer and winter), Spearmint, Stevia leaves, Sweet bay, Tansy, Tarragon, Thyme, Vanilla, Wintergreen, Woodruff, Wormwood)

TYPES OF APPLICATION: Chemical Fallow, Preplant Fallow Beds, Preplant, At-Planting, Preemergence, Hooded Sprayer in Row Middles, Shielded Sprayer in Row Middles, Wiper Application in Row Middles, Post-Harvest, plus Wiper Application (Peppermint and Spearmint Only), Spot Treatment (Peppermint and Spearmint Only)

PRECAUTIONS: This product could cause crop injury when applied prior to transplanting or direct-seeding crops into plastic mulch. Remove residual product from the plastic prior to planting with a single 0.5-inch application of water, either by natural rainfall or by irrigation. Ensure that the washwater flushes off the plastic mulch and does not enter the transplant holes. Application made at crop emergence will result in injury or death to emerged seedlings.

## Wiper Application, Spot Treatment (Peppermint and Spearmint Only)

USE INSTRUCTIONS: This product may be applied as a spot treatment in peppermint and spearmint, or over the top of peppermint and spearmint using a wiper applicator to control tall weeds. Application may be repeated on the same area at 30-day intervals. See additional instructions on the use of wiper applicators in the "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label.

RESTRICTIONS: Allow at least 7 days between application and harvest. For spot treatment application, do not treat more than 10 percent of the total field area to be harvested.

## **OIL SEED CROPS**

(Borage, Buffalo gourd (seed), Canola, Crambe, Flax (seed), Jojoba, Lesquerella, Meadowfoam, Mustard (seed), Rape (seed), Safflower, Sesame, Sunflower)

For use directions with Roundup Ready canola, see the "ROUNDUP READY CROPS" section of this label.

TYPES OF APPLICATION: Chemical Fallow, Preplant Fallow Beds, Preplant, At-Planting, Preemergence, Hooded Sprayer in Row Middles, Shielded Sprayer in Row Middles, Wiper Application in Row Middles, Post-Harvest, plus Preharvest (Safflower and Sunflower Only)

USE INSTRUCTIONS: Refer to the following table for maximum application rates of this product for use in canola, safflower and sunflower. Refer to other applicable sections of the label for more information on Maximum Application Rates.

Maximum Application Rates				
CANOLA				
Combined total for all preemergence and selective equipment applications	2 quarts per acre			
SAFFLOWER				
Combined total for all preemergence and selective equipment applications	3 quarts per acre			
Preharvest application	3 quarts per acre			
SUNFLOWER				
Combined total for all preemergence and selective equipment applications	1 quart per acre			
Preharvest application	1 quart per acre			

#### Preplant, At-Planting, Preemergence

USE INSTRUCTIONS: This product may be applied before, during or after planting oil seed crops listed in this section, but prior to crop emergence. Observe the maximum application rates for canola, safflower and sunflower listed at the beginning of this section.

TANK MIXTURES: For sunflowers, a tank mixture with pendimethalin may be applied before, during or after planting into conventionally tilled soil, a cover crop, established sod or previous crop residue.

#### **Selective Equipment**

USE INSTRUCTIONS: This product may be applied using a wiper applicator or shielded sprayer in between rows once the crop is established. See additional instructions on the use of wiper applicators and hooded sprayers in the "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label. Observe the maximum application rates for canola, safflower and sunflower listed at the beginning of this section.

## **Preharvest (Safflower and Sunflower Only)**

USE INSTRUCTIONS: This product provides weed control as a harvest aid when applied to a physiologically mature crop of safflower and sunflower prior to harvest. For safflower, apply a maximum of 3 quarts of this product when seed has lost its opaque character, approximately 20 to 30 days after the end of flowering of the secondary branches. For sunflower, apply a maximum of 1 quart of this product when the backsides of sunflower heads are yellow and bracts are turning brown, and seed moisture content is less than 35%. RESTRICTIONS: Application must be made at least 30 days prior to planting any crop not listed on this label. Allow a minimum of 7 days

RESTRICTIONS: Application must be made at least 30 days prior to planting any crop not listed on this label. Allow a minimum of 7 days between treatment and harvest or livestock feeding.

#### Post-Harvest

USE INSTRUCTIONS: This product may be applied for weed control after harvest of oil seed 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. Ensure that the specific product being used is labeled for post-harvest application in the crop harvested. Read and follow label directions of all products in the tank mixture.

RESTRICTIONS: Allow a minimum of 7 days between treatment and harvest or feeding of treated vegetation. Application must be made at least 30 days prior to planting any crop not listed on this label.

## **ROUNDUP READY® CROPS**

The following instructions or those separately published on Nufarm [manufacturer] labeling 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 for crops that do not contain a Roundup Ready gene listed on the label. USE THIS PRODUCT FOR POSTEMERGENCE APPLICATION ONLY ON CROP VARIETIES DESIGNATED AS CONTAINING A ROUNDUP READY GENE.

ROUNDUP READY CROPS CONTAIN A PATENTED GENE THAT PROVIDES TOLERANCE TO GLYPHOSATE, THE ACTIVE INGREDIENT IN THIS PRODUCT. THIS PRODUCT WILL CAUSE SEVERE CROP INJURY OR DESTRUCTION AND YIELD LOSS IF APPLIED TO CROPS THAT ARE NOT GLYPHOSATE-TOLERANT. AVOID CONTACT WITH FOLIAGE, GREEN STEMS, OR FRUIT OF CROPS, OR ANY DESIRABLE PLANTS THAT DO NOT CONTAIN A GLYPHOSATE-TOLERANCE GENE, AS SEVERE PLANT INJURY OR DESTRUCTION MAY RESULT.

The Roundup Ready designation indicates that the crop variety contains a patented gene that provides tolerance to this product. 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:** Use the required rates of this product in 5 to 20 gallons of spray solution per acre as a broadcast spray. Carefully select correct nozzles and spray pressure to avoid spraying a fine mist. Check for even distribution of spray droplets.

**For Aerial applications:** Use the required rates of this product in 3 to 15 gallons of spray solution per acre. See "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.

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, ADDITIVES AND APPLICATION INSTRUCTIONS" sections of the label for additional directions and restrictions on the application of this product.

Tank mixtures with other herbicides, insecticides, fungicides, micronutrients or foliar fertilizers may result in reduced weed control or crop injury and are NOT for over-the-top applications of this product unless otherwise noted on this product label, supplemental labeling or fact sheets published separately.

Ammonium sulfate may be mixed with this product for applications to Roundup Ready crops. Refer to the "MIXING, ADDITIVES AND APPLICATION INSTRUCTIONS" 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 directions 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 replant burndown treatment of this product may be needed 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 The second application should be made after some regrowth has occurred and at least 10 days after a previous application of this product.

TANK MIXTURES: Tank mixtures of this product with other herbicides insecticides fungicides micronutrients or foliar fertilizers could result in reduced weed control or crop injury when applied over the top of Roundup Ready crops. Read the label of all products used in the tank mixture prior to use to determine the potential for crop injury. Always read and follow label directions for all products in the tank mixture. Use all products according to rates and timing specified on the product label. Always predetermine the compatibility of tank mix products together in the carrier by mixing small proportional quantities in advance. Nufarm has not tested all tank mix product formulations for compatibility antagonism or product performance. Buyer and all users are responsible for any and all loss or damage in connection with the use or handling of mixtures of this product with herbicides or other materials that are not specifically listed on this label or on separate supplemental labeling or Fact Sheets for this product See the "MIXING" section of this label for more information on tank mixtures.

Ammonium sulfate may be added to spray solutions of this product for application to Roundup Ready crops. Refer to the "MIXING" section of this label for instructions on the use of ammonium sulfate.

**NOTE:** The following use directions 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 apply this product as a preplant burndown application to control existing weeds prior to crop emergence. Some weeds such as black nightshade, broadleaf signalgrass, sicklepod, Texas panicum, sandbur, annual morning glory, woolly cupgrass, shattercane, wild proso millet, burcucumber and giant ragweed with multiple germination times or suppressed (stunted) weeds might require a second application of this product for complete control. Make second application after some re-growth has occurred and a minimum of 10 days after a previous application of this product.

Application rates of this product specified on this label for the control of tough weeds or those specified on separate supplemental labeling for this product supersede rates in the "WEEDS CONTROLLED" section of this label.

RESTRICTIONS: Observe the maximum application rates stated throughout this label. Maximum application rates apply to the use of this product combined with the use of any and all other herbicides containing glyphosate whether applied separately or as mixtures. Calculate the application rates (glyphosate acid equivalents) and ensure that the total use of this and other glyphosate-containing products does not exceed the stated maximum rate. See the "PRODUCT INFORMATION" section of this label for more information on Maximum Application Rates. When applying this product as a tank mixture with one or more products refer to each individual tank-mix product label for restrictions and apply the tank mixture in accordance with the most restrictive statements for each product in the tank mixture.

## **ROUNDUP READY ALFALFA**

TYPES OF APPLICATIONS: Preplant, At-planting, Preemergence, Post-emergence (In-crop). USE INSTRUCTIONS: Refer to the following table for the maximum application rates of this product.

Maximum Application Rates				
Combined total per year for all applications, including Preplant during year of establishment 8 quarts per acre				
Combined total per year for in-crop applications for newly established and established 6 quarts per acre (192 fluid ounces per acre)				
Preplant, At-Planting and Preemergence single applications 64 fluid ounces per acre				

See the "ROUNDUP READY CROPS" section of this label for 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.

#### Preplant, At-Planting, Preemergence

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

#### Postemergence (In-crop)

USE INSTRUCTIONS: Applications of this product may be made over the top of Roundup Ready alfalfa (in-crop) from emergence until 5 days prior to cutting. To maximize crop yield and quality potential of forage and hay, applications of this product should be made after weeds have emerged but before alfalfa growth or re-growth interferes with spray coverage of the target weeds.

Refer to the "WEEDS CONTROLLED" section in the label for specified rates for specific weeds. When applied as directed, this product will control these annual and perennial grasses and broadleaf weeds. In addition to those weeds listed in these sections, this product will suppress or control the parasitic weed Dodder (*Cuscuta* spp.) in Roundup Ready alfalfa. Repeat applications may be necessary for complete control.

**New Stand Establishment (Seeding Year):** Due to the biology and breeding constraints of alfalfa, up to 10 percent of the seedlings may not contain a Roundup Ready gene and will not survive after the first application of this product. To eliminate the undesirable effects of stand gaps created by this loss of plants, a single application of at least 32 fluid ounces per acre of this product should be applied at or before the 4-trifoliate growth stage. Refer to the following table for application rates during stand establishment (seeding year).

NEW STAND ESTABLISHMENT (Seeding Year) Application Rates				
Prior to First Cutting				
From emergence up to 4 trifoliate leaves	1 to 2 quarts per acre			
From 5 trifoliate leaves before first cutting	Up to 2 quarts per acre			
After First Cutting				
In-crop application, per cutting up to 5 days before cutting	Up to 2 quarts per acre			

Established Stands (Non-seeding Year): Refer to the following table for directions and application rates for in-crop applications to established stands of alfalfa non-seeding year.

ESTABLISHMENT (Non-See Application Rates	<b>3</b> ,
In-crop applications, per cutting, up to 5 days before cutting	Up to 2 quarts per acre

PRECAUTIONS: Where Roundup Ready alfalfa is grown with a companion or cover crop, or is overseeded with a second species, incrop (over-the-top) applications of this product will eliminate the non-Roundup Ready (non-glyphosate tolerant) species.

RESTRICTIONS: Do not exceed 2 quarts per acre for any single in-crop application of this product. Sequential applications of this product should be at least 10 days apart. The combined total per year for all in-crop applications in both newly established (seeding year) and established stands (non-seeding year) must not exceed 6 quarts (192 fluid ounces) per acre. Remove domestic livestock before application. Wait a minimum of 5 days after last application before grazing, or cutting and feeding of forage and hay.

TANK MIXTURES: This product may be applied postemergence (in-crop) over the top of established stands of Roundup Ready alfalfa in tank mixtures described below according to the growing condition of the crop. Ensure that the product used is labeled for application postemergence (in crop) to alfalfa Read and follow label directions for all products in the tank mixture.

#### **Actively Growing Alfalfa**

For control of emerged annual grasses and broadleaf weeds when alfalfa is actively growing this product may be applied at up to 2 quarts per acre in a tank mixture with the following herbicides.

Assure II, Poast, Prism, Pursuit, Raptor, Select MAX

Do not include crop oil concentrate or methylated seed oil in tank mixtures of this product with Pursuit or Raptor as unsatisfactory crop injury could result.

#### **Dormant Alfalfa**

For control of emerged annual grasses and broadleaf weeds when alfalfa is dormant this product may be applied at up to 2 quarts per acre in a tank mixture with the following herbicides when daily temperatures remain above freezing.

Kerb 50 W, Lexone, Pursuit, Raptor, Sencor

Do not include crop oil concentrate or methylated seed oil in tank mixtures of this product with Pursuit or Raptor as unsatisfactory crop injury could result.

**PRECAUTIONS:** Where Roundup Ready alfalfa is grown with a companion or cover crop or is overseeded with a second species in crop (over-the-top) application of this product will eliminate the non Roundup Ready (non glyphosate tolerant) species.

**RESTRICTIONS:** Do not exceed 66 fluid ounces per acre for any single in-crop application of this product. Sequential applications of this product must be a minimum of 7 days apart. The combined total per year for all in crop applications in both newly established (seeding year) and established stands (non seeding year) must not exceed 192 fluid ounces per acre. Do not apply to frozen or snow covered ground. Remove domestic livestock before application. Wait a minimum of 5 days after application before grazing or cutting and feeding of forage and hay.

## **ROUNDUP READY CANOLA (SPRING VARIETIES)**

Roundup Ready spring canola is defined as those Roundup Ready canola varieties that are seeded in the spring and harvested in the fall and do not enter a winter dormancy period.

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

USE INSTRUCTIONS: Refer to the following table for the maximum application rates for this product with Roundup Ready canola (spring varieties).

Maximum Application Rates			
Total of all Preplant, At-Planting, Preemergence applications	2 quarts per acre		
Total of all In-crop applications from emergence To 6-leaf stage	1 quart per acre		

See the "ROUNDUP READY CROPS" section of this label for 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.

## Preplant, At-Planting, Preemergence

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

RESTRICTIONS: Maximum quantity of this product that may be applied for all preplant, at-planting and preemergence applications combined is 2 quarts per acre per season.

#### Postemergence (In-crop)

USE INSTRUCTIONS: This product may be applied postemergence (in crop) to spring varieties of 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>Single Application:</u> Apply 16 to 24 fluid ounces of this product per acre no later than the 6-leaf stage for the control of annual weeds. Avoid overlapping applications as this may result in temporary yellowing, delayed flowering, and/or growth reduction. Similar crop injury may result when applications of more than 16 fluid ounces per acre are applied after the 4-leaf stage.

<u>Sequential Applications:</u> Apply 16 fluid ounces of this product 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 multiple applications are needed for adequate weed control.

RESTRICTIONS: No more than two in-crop (over-the-top) broadcast applications may be made from crop emergence through the 6-leaf stage of development, and the total of all in-crop applications must not exceed 32 fluid ounces of this product per acre. Allow a minimum of 60 days between last application and canola harvest.

## **ROUNDUP READY CANOLA (WINTER VARIETIES)**

Roundup Ready winter canola is defined as those Roundup Ready canola varieties that are seeded in early fall and harvested the following spring or summer. Winter canola varieties are intended to enter a cold period dormancy in the winter.

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

USE INSTRUCTIONS: Refer to the following table for the maximum application rates of this product with Roundup Ready canola (winter varieties).

Maximum Application Rates		
Total of all Preplant, At-Planting, Preemergence applications	2 quarts per acre	
Total of all In-crop applications from emergence to canopy closure or prior to bolting in the spring	2 quarts per acre	

See the "ROUNDUP READY CROPS" section of this label for 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.

#### Preplant, At-Planting, Preemergence

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

#### Postemergence (In-crop)

USE INSTRUCTIONS: This product may be applied to Roundup Ready winter canola varieties from emergence to canopy closure in the fall and prior to bolting in the spring. Applications made during or after bolting may result in crop injury and yield loss. To maximize yield potential, make applications early to eliminate competing weeds.

Some weeds with multiple germination times, or suppressed (stunted) weeds, or weeds that have overwintered may require sequential applications of this product for control. The second application should be made after some regrowth has occurred and at least 60 days after a previous application of this product.

Single Application: Apply 24 to 32 fluid ounces of this product per acre in the fall. Applications in the fall should be made when weeds are small and actively growing. Use the higher rate in the specified range when weed densities are high, when weeds have overwintered or when weeds become large and well established. Applications of greater than 24 fluid ounces per acre prior to the 6-leaf stage may result in reduced crop growth in the fall. Avoid spray overlaps. Spray overlaps may result in temporary yellowing and/or growth reduction.

<u>Sequential Applications</u>: Apply 16 to 32 fluid ounces of this product per acre to 2-leaf or larger canola in the fall, followed by a sequential application at the same rate and at a minimum interval of 60 days, but before bolting in the spring. Sequential applications are recommended for early emerging annual weeds and winter emerging weeds such as downy brome, jointed goatgrass and ryegrass, and for weeds that have overwintered. This product will control or suppress most perennial weeds. For some perennial weeds, sequential applications may be required to reduce competition with the crop.

RESTRICTIONS: No more than two over-the-top broadcast applications may be made from crop emergence up to the onset of bolting, and the total in-crop application must not exceed 64 fluid ounces of this product per acre. Applications of greater than 24 fluid ounces per acre prior to the 6-leaf stage may result in reduced crop growth in the fall. Allow a minimum of 60 days between last application and harvest of canola grain. No waiting period is required between application and open grazing of livestock.

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

## PRODUCT INFORMATION

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

- Applying this product to corn hybrids which are not designated as Roundup Ready will result in severe crop injury and yield loss.
- The Roundup Ready designation indicates that the corn contains a patented gene which provides tolerance to this herbicide. Information on Roundup Ready corn may be obtained from your seed supplier or representative.

## **APPLICATION INSTRUCTIONS**

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

## **Maximum Allowable Yearly Rates:**

- Preplant: Maximum amount of this product which can be applied prior to crop emergence is 5 quarts per acre.
- In-crop: Maximum combined total of multiple in-crop applications from emergence through the V8 stage or 30 inches is 2 quarts per acre
- Preharvest: Maximum amount of this product that can be applied after maximum kernel fill is complete and the crop is physiologically mature (black layer formation) until 7 days before harvest is 1 quart per acre.
- Cropping Season: Combined total per year for all applications may not exceed 8 quarts per acre.

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. Applications should be made to actively growing weeds before they reach the maximum size listed in the label booklet. Refer to the label booklet for proper use instructions.

The addition of 1 to 2 percent dry ammonium sulfate by weight or 8.5 to 17 pounds per 100 gallons of water may increase the performance of this product under hard water conditions, drought conditions or when tank mixed with Bullet®, Micro-Tech® or Partner® herbicides. Ensure that ammonium sulfate is completely dissolved in the spray tank before adding herbicides. Thoroughly rinse the spray system with clean water after use to reduce corrosion. The addition of other additives, including fertilizers and micronutrients is not recommended with this product since they may result in increased potential for crop injury.

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

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

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

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

For aerial applications: Use the specified rates of this product in 3 to 15 gallons of spray solution per acre but do not exceed 1 quart of product per acre. Refer to label booklet for weeds controlled or suppressed. AVOID DRIFT – DO NOT APPLY DURING INVERSION CONDITIONS, WHEN WINDS ARE GUSTY OR UNDER ANY OTHER CONDITIONS WHICH FAVOR DRIFT. DRIFT MAY CAUSE DAMAGE TO ANY VEGETATION CONTACTED TO WHICH TREATMENT IS NOT INTENDED. TO PREVENT INJURY TO ADJACENT VEGETATION, APPROPRIATE BUFFER ZONES MUST BE MAINTAINED.

#### WEED CONTROL DIRECTIONS

Apply 24 to 32 fluid ounce of this herbicide per acre for control of labeled grasses and broadleaf weeds in conventional and no-till corn production systems. Refer to the label booklet for rate directions for specific annual weeds. Up to 1 quart per acre will control or suppress the growth of perennial weeds such as: bermudagrass, Canada thistle, common milkweed, field bindweed, hemp dogbane, horsenettle, nutsedge, quackgrass, rhizome johnsongrass, redvine, trumpetcreeper, swamp smartweed, and wirestem muhly. For additional information on perennial weeds, see the label booklet.

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

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

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

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

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

## FIELD CORN HYBRIDS WITH ROUNDUP READY 2 TECHNOLOGY

Field corn hybrids with Roundup Ready 2 Technology include Roundup Ready Corn 2 and seed products displaying the Roundup Ready 2 Technology logo.

TYPES OF APPLICATIONS: Preplant, At-Planting, Preemergence, Postemergence (In-crop), Spot Treatment, Preharvest and Post-Harvest. USE INSTRUCTIONS: Refer to the following table for maximum application rates of this product with corn hybrids with Roundup Ready 2 Technology.

Maximum Application Rates	
Combined total per year for all applications	8 quarts per acre
Total of all Preplant, At-Planting, Preemergence applications	5 quarts per acre
Maximum single In-crop application rate up to 48 inch corn	1.5 quarts per acre
Total of all in-crop applications from emergence through 48-inch corn	3 quarts per acre (48 fluid ounces per acre per application)
Maximum preharvest application rate after maximum kernel fill is complete and the corn is physiologically mature (black layer formation) until 7 days before harvest	1 quart per acre

<sup>\*</sup>See RESTRICTIONS for Preharvest application.

See the "ROUNDUP READY CROPS" section of this label for 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.

PRECAUTION: The use of the in-crop (over-the-top) rates described in these instructions on other than corn hybrids with Roundup Ready 2 Technology may cause crop injury and reduced yields.

## Preplant, At-Planting, Preemergence

USE INSTRUCTIONS: This product may be applied alone or in a tank mixture before, during or after planting of corn hybrids with Roundup Ready 2 Technology.

TANK MIXTURES: This product may be tank-mixed with the products listed below. Ensure that the specific product being used in the tank mixture is registered for application prior to emergence of corn. Read and follow label directions of all products in the tank mixture. Apply these tank mixtures in 10 to 20 gallons of water, or 10 to 60 gallons of nitrogen solution, per acre.

Aim, Aim EC, Axiom, Balance Flexx, Banvel, Bleep MAGNUM, Bleep II MAGNUM, Bicep Lite II MAGNUM, Bullet, Cinch, Cinch ATZ, Clash, Clarity, Corvus, Degree, Degree Xtra, Distinct, Dual MAGNUM, Dual II MAGNUM, Frontier, FulTime, Guardsman, Guardsman MAX, Harness, Harness Xtra, Harness Xtra, Harness Xtra, Herness Xtra, Herness

RESTRICTIONS: Maximum quantity of this product that may be applied for all preplant, at-planting and preemergence applications combined is 5 quarts per acre per season. Application of 2 4-D or dicamba must be made a minimum of 7 days prior to planting corn.

NOTE: For maximum weed control, apply postemergence (in-crop) following the use of preemergence residual products listed above.

#### Postemergence (In-crop)

USE INSTRUCTIONS: This product may be applied alone or in a tank mixture over the top of corn hybrids with Roundup Ready 2 Technology from emergence through the V8 stage (8 leaves with collars), or until corn height reaches 30 inches (free standing), whichever comes first. Use of drop nozzles is desirable for optimum spray coverage and weed control when corn height is 24 to 30 inches. For corn heights 30 to 48 inches (free standing), apply this product using only ground application equipped with drop nozzles aligned to avoid spraying into the whorls of the corn plants. Single in-crop application of this product up to 48 inches in height must not exceed 48 fluid ounces per acre. Sequential in-crop application of this product from emergence through 48 inches in height must not exceed 3 quarts per acre per growing season.

When applied as directed, this product will control annual grasses and broadleaf weds listed on this label. Many perennial grasses and broadleaf weeds will be controlled or suppressed with one or more application of this product. Apply postemergence 24 to 33 fluid ounces of this product per acre before weeds exceed 4 inches in height, or before they become competitive with the crop. If new flushes of weeds occur, a sequential application of this product as 24 to 33 ounces per acre may be made before weeds exceed 4 inches in height.

TANK MIXTURES: This product may be tank-mixed with the following products and applied postemergence (in-crop) over the top of corn hybrids with Roundup Ready 2 Technology. Ensure that the specific product being used in the tank mixture is registered for application postemergence (in-crop) to corn. Read and follow label directions of all products in the tank mixture.

Aim EC, Banvel, Basis, Basis Gold, Bullet, Callisto, Capreno, Clash, Clarity, Corvus, Degree, Degree Xtra, Distinct, Equip, Harness, Harness Xtra, Harness X

TANK-MIX PARTNER	MAXIMUM HEIGHT OF CORN AT APPLICATION			
Degree Degree Xtra Harness Harness Xtra Harness Xtra Harness Xtra 5.6L Warrant	11 inches			
Bullet* Micro-Tech*	5 inches			
atrazine	12 inches			

<sup>\*</sup> Bullet and Micro-Tech herbicides are not registered for use as a postemergence application in Texas.

RESTRICTIONS: 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 or grain.

#### **Preharvest**

USE INSTRUCTIONS: This product may be applied for annual and perennial weed control prior to harvest at up to 33 fluid ounces per acre. Make application at 35 percent grain moisture or less. Ensure that maximum kernel fill is complete and the corn is physiologically mature (black layer formed).

RESTRICTIONS: A preharvest application may only be made if the combined total of previously applied over-the-top or drop nozzle applications does not exceed 64 fluid ounces (2 quarts) of this product per acre. Allow a minimum of 7 days between application and harvest or feeding of corn stover or grain.

#### Post-Harvest

USE INSTRUCTIONS: This product may be applied for weed control after crop harvest. 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. Ensure that the specific product being used is labeled for post-harvest application in field corn. Read and follow label directions for all products in the tank mixture. RESTRICTIONS: Allow a minimum of 7 days between application and harvest or the feeding of vegetation within the application area Application must be made a minimum of 30 days prior to the planting of any crop not listed on this label.

## **ROUNDUP READY SWEET CORN**

TYPES OF APPLICATIONS: Preplant, At-Planting, Preemergence, Postemergence (In-crop). USE INSTRUCTIONS: Refer to the following table for maximum application rates of this product with Roundup Ready sweet corn.

Maximum Application Rates				
Combined total per year for all applications	8 quarts per acre			
Total of all Preplant, At-Planting, Preemergence applications	5 quarts per acre			
Maximum single In crop application rate up to 48-inch sweet corn	2 quarts per acre			
Total of all in-crop applications from emergence through 48-inch sweet corn	6.1 quarts per acre (66 fluid ounces per acre per application)			

See the "ROUNDUP READY CROPS" section of this label for 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.

RESTRICTIONS: The maximum combined total quantity of this product for all applications in a season is 8 quarts per acre. Refer to other applicable sections of the label for more information on Maximum Application Rates.

PRECAUTIONS: The use of the in crop (over the-top) applications described in this section on other than Roundup Ready sweet corn could cause crop injury and reduced yields.

## Preplant, At-Planting, Preemergence

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

TANK MIXTURES: This product may be tank-mixed with the products listed below. Ensure that the specific product being used in the tank mixture is registered for application prior to emergence of sweet corn. Read and follow label directions of all products in the tank mixture. Apply these tank mixtures in 10 to 20 gallons of water, or 10 to 60 gallons of nitrogen solution, per acre.

Aim EC, Bicep II MAGNUM, Bicep Lite II Magnum, Bullet, Cinch, Cinch ATZ, Degree, Degree Xtra, Dual MAGNUM, FulTime, Guardsman MAX, Harness, Harness Xtra, Ha

RESTRICTIONS: Maximum quantity of this product that may be applied for all preplant, at-planting and preemergence applications combined is 5 quarts per acre per season.

NOTE: For maximum weed control, apply postemergence (in-crop) following the use of preemergence residual products listed above.

#### Postemergence (In-crop)

USE INSTRUCTIONS: This product may be applied alone or in a tank mixture over the top of Roundup Ready sweet corn from emergence through the V8 stage (8 leaves with collars), or until sweet corn height reaches 30 inches (free standing), whichever comes first. Use of drop nozzles is desirable for optimum spray coverage and weed control when sweet corn height is 24 to 30 inches. For sweet corn heights 30 to 48 inches (free standing), avoid spraying if the crop has reached the reproductive stage and apply this product using only ground application equipped with drop nozzles aligned to avoid spraying into the whorls of the sweet corn plants. Single in-crop application of this product up to 48 inch corn must not exceed 66 fluid ounces per acre. Sequential in-crop application of this product from emergence through 48 inches in height must not exceed 6.1 quarts per acre per growing season.

When applied as directed, this product will control annual grasses and broadleaf weds listed on this label. Many perennial grasses and broadleaf weeds will be controlled or suppressed with one or more application of this product. Apply postemergence 24 to 33 fluid ounces of this product per acre before weeds exceed 4 inches in height, or before they become competitive with the crop. If new flushes of weeds occur, a sequential application of this product as 24 to 33 ounces per acre may be made before weeds exceed 4 inches in height.

TANK MIXTURES: This product may be tank-mixed with the following products and applied postemergence (in-crop) over the top of Roundup Ready sweet corn. Ensure that the specific product being used in the tank mixture is registered for application postemergence (in-crop) to sweet corn. Read and follow label directions of all products in the tank mixture.

Aim EC, Callisto, Impact, Laudis, Option

RESTRICTIONS: Allow a minimum of 10 days between in-crop applications of this product. Do not apply atrazine in a tank mix with this product when sweet corn plants are greater than 12 inches tall. Allow a minimum of 30 days between application of this product and harvest of sweet corn forage or grain.

## ROUNDUP READY COTTON

TYPES OF APPLICATIONS: Preplant, At-Planting, Preemergence, Postemergence (In-crop), Selective Equipment (In-crop), Preharvest. USE INSTRUCTIONS: Refer to the following table for maximum application rates of this product with Roundup Ready cotton.

Maximum Application Rates	
Combined total per year for all applications	8 quarts per acre
Total of all Preplant, At-Planting, Preemergence applications	5 quarts per acre
Total in-crop applications from cracking to layby	3.75 quarts per acre
Maximum preharvest application rate	2 quarts per acre
Combined total of all In-crop applications from emergence through harvest	6 quarts per acre

See the "ROUNDUP READY CROPS" section of this label for 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.

## Preplant, At Planting, Preemergence

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

TANK MIXTURES: This product may be tank mixed with 2,4-D or dicamba (such as Clash or Clarity) and applied prior to planting only. This product may be tank mixed with the following products and applied prior to crop emergence. Ensure that the product used is labeled for application prior to the emergence of cotton. Read and follow label directions for all products in the tank mixture.

Caparol, Command, Cotoran, Cotton Pro, Dawn, Direx, Dual MAGNUM, Dual II MAGNUM, Karmex, Meturon, Panther, PARRLAY, Prowl, Prowl, Prowl H2O, Reflex, Sharpen, Stalwart, Staple, Valor, Warrant, Zonal

RESTRICTIONS: Maximum quantity of this product that may be applied for all preplant at-planting and preemergence applications combined is 5 quarts per acre per season.

## Postemergence (In-crop)

USE INSTRUCTIONS: This product may be applied over the top of Roundup Ready cotton (in-crop) at rates up to 1 quart per acre per application from cracking until the 4-leaf (node) stage of development (until the fifth true leaf reaches the size of a quarter). NO MORE THAN TWO OVER THETOP BROADCAST APPLICATIONS MAY BE MADE FROM CROP EMERGENCE THROUGH THE 4 LEAF (NODE) STAGE OF DEVELOPMENT SEQUENTIAL OVER THE-TOP OR POST DIRECTED APPLICATIONS OF THIS PRODUCT IN CROP MUST BE A MINIMUM OF 10 DAYS APART AND COTTON MUST HAVE AT LEAST TWO NODES OF INCREMENTAL GROWTH BETWEEN

APPLICATIONS. Over the top application made after the 4 leaf (node) stage of development could result in boll loss delayed maturity and/or yield loss.

TANK MIXTURES: This product may be tank mixed with the following products and applied over the top of Roundup Ready cotton up to the 4 leaf stage. Ensure that the product used is labeled for application postemergence (in crop) to cotton. Read and follow label directions for all products in the tank mixture.

Assure II, Dual MAGNUM, Envoke, Fusilade, MSMA, PARRLAY, Poast Plus, Reflex, Select, Select MAX, Stalwart, Staple, Warrant

#### Salvage Treatment

This application may be made after the 4-leaf stage of development and only when weeds threaten to cause the loss of the crop Apply 1 quart of this product per acre either as an over the top application or as a post directed application sprayed higher on the cotton plants and onto the weeds.

IN THE STATE OF ARIZONA ONLY up to 1.5 quarts of this product may be applied per acre either as an over the top application or a post directed application for salvage treatment.

**NOTE:** SALVAGE TREATMENT WILL RESULT IN SIGNIFICANT BOLL LOSS DELAYED MATURITYAND/OR YIELD LOSS NO MORE THAN ONE SALVAGE TREATMENT MAY BE MADE PER GROWING SEASON.

RESTRICTIONS: Maximum quantity of this product that may be applied for all in crop applications from cracking to layby combined is 3.75 quarts per acre per season. Allow a minimum of 1 days between application and harvest of cotton. DO NOT ADD ADDITIONAL SURFACTANT OR ADDITIVES CONTAINING SURFACTANT TO THIS PRODUCT (OTHER THAN THOSE CONTAINED IN ANY TANK MIX PRODUCT) FOR OVER THE TOP APPLICATION TO ROUNDUP READY COTTON.

#### Selective Equipment (In crop)

USE INSTRUCTIONS: This product may be applied using precision post-directed or hooded sprayers at rates of up to 1 quart per acre per application to Roundup Ready cotton through layby. At this stage use post directed application equipment to direct the spray towards the base of the cotton plants avoiding contact of the herbicide spray with the leaves of the plant. To minimize spray contact maintain a low spray pressure (less than 30 pounds per square inch) and place nozzles in a low position directing a horizontal spray pattern under the leaves of the cotton plant and onto the weeds in the row. For best results apply this product while weeds are small (less than 3 inches in height). See additional use instructions in the "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label

TANK MIXTURES This product may be tank mixed with the following products for in crop application using precision post directed or hooded sprayers Ensure that the product used is labeled for application postemergence (in crop) to cotton. Read and follow label directions for all products in the tank mixture.

Aim, Caparol, Cotoran, Direx, Envoke, Layby-Pro, MSMA, Panther, PARRLAY, Prowl, Prowl H2O, Staple, Valor

Staple could cause leaf yellowing and/or leaf crinkling when applied postemergence (in crop) to Roundup Ready cotton.

RESTRICTIONS: Maximum quantity of this product that may be applied for all in crop applications from cracking to layby combined is 3.75 quarts per acre per season. Allow a minimum of 7 days between application and harvest of cotton. NO MORE THAN TWO APPLICATIONS OF THIS PRODUCT MAY BEMADE FROM THE 5 LEAF STAGE THROUGH LAYBY SEQUENTIAL OVER THE-TOP OR POST DIRECTED IN CROP APPLICATIONS OF THIS PRODUCT MUST BE A MINIMUM OF 10 DAYS APART AND COTTON MUST HAVE AT LEAST TWO NODES OF INCREMENTAL GROWTH BETWEEN APPLICATIONS.

## **Preharvest**

USE INSTRUCTIONS Apply up to 2 quarts of this product per acre after 20 percent boll crack for annual and perennial weed control prior to crop harvest.

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

PRECAUTIONS: Do not apply this product for preharvest weed control to cotton grown for seed as a reduction in germination or vigor could occur. Buyer and all users are responsible for any and all loss or damage in connection with the preharvest use of this product on Roundup Ready cotton grown for seed.

RESTRICTIONS: Allow a minimum of 7 days between application and harvest of cotton. DO NOT ADD ADDITIONAL SURFACTANT OR ADDITIVES CONTAINING SURFACTANT TO THIS PRODUCT FOR PREHARVEST APPLICATION TO ROUNDUP READY COTTON.

ATTENTION: USE OF THIS PRODUCT IN ACCORDANCE WITH LABEL DIRECTIONS IS EXPECTED TO RESULT IN NORMAL GROWTH OF ROUNDUP READY 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 ACCORDANCE WITH THE LABEL DIRECTIONS IN SOME CASES THESE FACTORS CAN RESULT IN BOLL LOSS DELAYED MATURITY AND/OR YIELD LOSS.

#### **ROUNDUP READY SOYBEANS**

TYPES OF APPLICATION: Preplant, At Planting, Preemergence, Postemergence (In crop), Preharvest, Post Harvest USE INSTRUCTIONS: Refer to the following table for maximum application rates of this product with Roundup Ready soybean.

Maximum Application Rates	
Combined total per year for all applications	8 quarts per acre
Total of all Preplant, At-Planting, Preemergence applications	5 quarts per acre
Total in-crop applications from cracking throughout flowering	3 quarts per acre
Maximum preharvest application rate	1 quart per acre
Combined total of all In-crop applications from emergence through harvest	1 quart per acre

See the "ROUNDUP READY CROPS" section of this label for 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.

#### Preplant, At Planting, Preemergence

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

TANK MIXTURES: This product may be tank mixed with 2 4-D, dicamba (such as Clash, Banvel or Clarity) and applied prior to planting only. This product may be tank-mixed with the following products and applied prior to crop emergence. Ensure that the product used is labeled for application prior to emergence of soybean. Read and follow label directions for all products in the tank mixture.

Aim, Assure II, Authority, Authority Assist, Authority First, Authority MTZ, Authority XL, Axiom, Blanket, Boundary, Cadet, Canopy, Canopy EX, Classic, Cloak, Cloak EX, Cobra, Command, Command Xtra, Dawn, Domain, Dual MAGNUM, Dual II MAGNUM, FirstRate, Flexstar, Frontier, Fusion, Gangster, Gauntlet INTRRO, Lexone, Linex, Linuron, Lorox, Lorox Plus, Me Too Lachlor, Micro-Tech, Optill, Outlook, PARRLAY, Pendimax, Phoenix, Prowl, Prowl H2O, Panther, Pursuit, Pursuit Plus, Python, Reflex, Resource, Rhythm, Scepter Select, Select MAX, Sencor, Sharpen, Spartan, Squadron, Steel, Treflan, Valor, Valor, Valor XLT

RESTRICTIONS: Maximum quantity of this product that may be applied for all preplant at-planting and preemergence applications combined is 5 quarts per acre per season.

#### Postemergence (In crop)

USE INSTRUCTIONS: This product may be used to control annual grasses and broadleaf weeds in Roundup Ready soybean from emergence (cracking) through flowering (R2 stage soybean). R2 stage soybean ends when a pod 5 millimeters (3/16 inch) long appears at one of the four uppermost nodes on the main stem with a fully developed leaf (R3 stage). Refer to the "WEEDS CONTROLLED" section of this label for application rates for specific annual weeds. An initial application of 1 quart of this product per acre will control or suppress most 2- to 8 inch tall weeds. Weeds will be 2 to 8 inches tall approximately 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 applied up to 2 quarts per acre as a single in crop application for control of annual weeds and where dense weed populations exist.

Application of 1 to 2 quarts of this product per acre (single or multiple applications) will control or suppress perennial weeds including bermudagrass, Canada thistle, common milkweed, field bindweed, hemp, dogbane, Horsenettle, marestail (horseweed), nutsedge, quackgrass, rhizome Johnsongrass, Redvine, Trumpetcreeper, swamp smartweed and wirestem multip For best results allow perennial weed species to achieve at least 6 inches of growth before applying this product.

Under adverse growing conditions including drought hail or wind damage or a poor soybean stand that slows or delays canopy closure a sequential application of this product might 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 quart of this product per acre when the weed is 8 to 12 inches tall to increase control and possibly avoid the need for a sequential application.

TANK MIXTURES: This product may be tank-mixed with the following products and applied postemergence (in crop) over the top of Roundup Ready soybean. Ensure that the product used is labeled for application postemergence (in-crop) to soybean. Read and follow label directions for all products in the tank mixture.

Arrow, Assure II, Basagran, Cadet Classic, Cobra, Dawn Extreme, FirstRate, Flexstar, Fusilade DX, Fusion, Harmony GT XP, Phoenix, Poast, Poast Plus, Pursuit, Pursuit Plus, Raptor, Reflex, Resource, Rhythm, Select, Select MAX, Synchrony STS, Targa Ultra, Blazer, Warrant

PRECAUTIONS: In some cases these tank-mix products will cause visual soybean injury.

RESTRICTIONS: The combined total application of this product from crop emergence through harvest must not exceed 3 quarts per acre. The maximum rate for any single in crop application is 2 quarts per acre. The maximum combined total amount of this product that may be applied during flowering (R2 stage soybean) is 2 quarts per acre.

#### **Preharvest**

USE INSTRUCTIONS: Apply up to 1 quart of this product per acre to Roundup Ready soybean for weed control prior to harvest after pods have set and lost all green color. Take care to avoid excessive seed shatter loss due to ground application equipment.

RESTRICTIONS: Allow a minimum of 14 days between application and harvest of soybean gram or feeding of soybean grain forage or hay.

#### **Post Harvest**

USE INSTRUCTIONS: This product may be applied for weed control after harvest of Roundup Ready soybean. Higher rates might be required for control of large weeds that were growing in the field at the time of harvest. Tank mixtures with 2 4-D or dicamba may be used. Ensure that the product used is labeled for weed control application after harvest of soybean. Read and follow label directions for all products in the tank mixture.

RESTRICTIONS: Application must be made a minimum of 30 days prior to the planting of any crop not listed on this label

## **ROUNDUP READY® 2 YIELD SOYBEANS**

TYPES OF APPLICATIONS: Preplant, At-Planting, Preemergence, Postemergence (In-crop), Preharvest, Post-Harvest. USE INSTRUCTIONS: Refer to the following table for maximum application rates of this product with Roundup Ready 2 Yield soybeans.

Maximum Application Rates		7	4	
Combined total per year for all applications				8 quarts per acre
Total of all Preplant, At-Planting, Preemergence applications				5 quarts per acre
Total of all in-crop applications from cracking through flowering (R2 stage soybeans)				3 quarts per acre
Maximum preharvest application rate				1 quart per acre

See the "ROUNDUP READY CROPS" section of this label for 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.

## Preplant, At-Planting, Preemergence

USE INSTRUCTIONS: This product may be applied before, during or after planting Roundup Ready 2 Yield soybeans.

TANK MIXTURES: This product may be tank-mixed with 2,4-D, dicamba (such as Clash, Banvel or Clarity) and applied prior to planting only. This product may be tank-mixed with the following products and applied prior to crop emergence. Ensure that the specific product being used in the tank mixture is registered for application prior to emergence of soybeans. Read and follow label directions of all products in the tank mixture.

Aim, Assure II, Authority, Authority Assist, Authority First, Authority MTZ, Authority XL, Axiom, Blanket, Boundary, Cadet, Canopy, Canopy EX, Classic, Cloak, Cloak EX, Cobra, Command, Command Xtra, Dawn, Domain, Dual MAGNUM, Dual II MAGNUM, FirstRate, Flexstar, Frontier, Fusion, Gangster, Gauntlet, INTRRO, Lexone, Linex, Linuron, Lorox, Lorox Plus, Me-Too-Lachlor, MicroTech, Optill, Outlook, Panther, PARRLAY, Pendimax, Phoenix, Prowl, Prowl H2O, Pursuit, Pursuit Plus, Python, Reflex, Resource, Rhythm, Scepter Select, Select MAX, Sencor, Sharpen, Spartan, Squadron, Steel, Treflan, Valor, Valor XLT

RESTRICTIONS: Maximum quantity of this product that may be applied for all preplant, at-planting and preemergence applications combined is 5 quarts per acre per season.

#### Postemergence (In-crop)

USE INSTRUCTIONS: This product may be used to control annual grasses and broadleaf weeds in Roundup Ready 2 Yield soybeans. Applications of this product can be made in Roundup Ready 2 Yield soybeans from emergence (cracking) through flowering (R2 stage soybeans). R2 stage soybeans end when a pod 5 millimeters (3/16 inch) long appears at one of the four uppermost nodes on the main stem with a fully developed leaf (R3 stage). Refer to the "Annual Weeds Rate Section" of the label for this product for application rates for specific annual weeds. In general apply an initial application of 32 fluid ounces per acre on 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 applied up to 2 quarts per acre as a single, in-crop application for control of annual weeds and where dense weed populations exist.

A 1 to 2 quarts 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 muhly. 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 2 YIELD

SOYBEAN CROP. To control giant ragweed, apply 1 quart of this product per acre when the weed is 8 to 12 inches tall to increase control and possibly avoid the need for a sequential application.

TANK MIXTURES: This product may be tank-mixed with the following products and applied postemergence (in-crop) over the top of Roundup Ready 2 Yield soybeans. Ensure that the specific product being used in the tank mixture is registered for application postemergence (in-crop) to soybeans. Read and follow label directions of all products in the tank mixture.

Arrow, Assure II, Basagran, Cadet, Classic, Cobra, Dawn, Extreme, FirstRate, Flexstar, Fusilade DX, Fusion, Harmony GT XP, Phoenix, Poast, Poast Plus, Pursuit, Pursuit Plus, Raptor, Reflex, Resource, Rhythm, Select, Select MAX, Synchrony STS, Targa, Ultra Blazer, Warrant

RESTRICTIONS: This combined total application from crop emergence through harvest must not exceed 3 quarts per acre. The maximum rate for any single in-crop application is 2 quarts per acre. The maximum combined total of this product that can be applied during flowering (R2 stage soybeans) is 2 quarts per acre.

#### Preharvest

USE INSTRUCTIONS: This product may be applied to Roundup Ready 2 Yield soybeans for weed control prior to harvest. Apply up to 1 quart of this product per acre after pods have set and lost all green color. Take care to avoid excessive seed shatter loss due to ground application equipment.

RESTRICTIONS: Allow a minimum of 14 days between final application and harvest of soybean grain or feeding of soybean grain, forage or hay.

#### **Post-Harvest**

USE INSTRUCTIONS: This product may be applied for weed control after harvest of Roundup Ready 2 Yield 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. Ensure that the product used is labeled for weed control application after harvest of soybean. Read and follow label directions for all products in the tank mixture.

#### SUGAR BEETS - ROUNDUP READY

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

USE INSTRUCTIONS: Refer to the following table for maximum application rates of this product with Roundup Ready sugarbeet.

Maximum Application Rates					
Combined total per year for all applications		8 quarts per acre			
Total of all Preplant, At-Planting, Preemergence	applications	5 quarts per acre			
Total of all applications made from emergence to	84 fluid ounces per acre				
Total of all applications made between 8-leaf stage and canopy closure		2 quarts per acre			

See the "ROUNDUP READY CROPS" section of this label for 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.

#### Preplant, Preemergence, At-Planting

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

TANK MIXTURES: This product may be tank mixed with the following products and applied prior to crop emergence. Ensure that the product used is labeled for application prior to emergence of sugarbeet. Read and follow label directions for all products in the tank mixture.

Norton SC

RESTRICTIONS: Maximum quantity of this product that may be applied for all preplant at planting and preemergence applications combined is 5 quarts per acre per season.

## Postemergence (In-crop)

USE INSTRUCTIONS: This product may be applied postemergent 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. Refer to the "WEEDS CONTROLLED" section for rate directions for specific weeds.

TANK MIXTURES: This product may be tank-mixed with the following products and applied postemergence (in-crop) over the top of Roundup Ready sugarbeet. Ensure that the product used is labeled for application postemergence (in-crop) to sugar beets. Read and follow label directions for all products in the tank mixture.

Assure II, Betamix, Betanex, Dual MAGNUM, Norton SC, Outlook, Progress, Select, Stinger, Upbeet

RESTRICTIONS: The combined total application rate from crop emergence through harvest must not exceed 4.5 quarts per acre. The maximum rate for any single application from crop emergence until the 8-leaf stage is 47 fluid ounces per acre. The maximum rate for any single applications between the 8-leaf stage and canopy closure is 1 quart per acre. Allow a minimum of 30 days between last application and sugar beet harvest.

## 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 PRODUCTS 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 shake, roll or agitate to mix well before using.

**PESTICIDE DISPOSAL:** Wastes resulting from the use of this product that cannot be used or chemically reprocessed must 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 label safeguards until container is destroyed.

**CONTAINER HANDLING: NOTE:** This product is available in multiple containers. Refer to the Net Contents section of this products labeling for the applicable "No refillable" or "Refillable" designation. Follow the container disposal [handling] instructions below that apply to your container type / size.

Nonrefillable Containers 5 Gallons or Less: Nonrefillable container. Do not reuse or refill this container. Offer for recycling if available. Triple rinse container (or equivalent) promptly after emptying. 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 1/4 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 other procedures approved by State and local authorities. Plastic containers are also disposable by incineration, or, if allowed by State and local authorities, by burning. If burned stay out of smoke.

Nonrefillable containers larger than 5 gallons: Nonrefillable container. Do not reuse or refill this container. Offer for recycling if available. If recycling or reconditioning not available, puncture and dispose of in a sanitary landfill, or by other procedures approved by State and local authorities. Plastic containers are also disposable by incineration, or, if allowed by State and local authorities, by burning. If burned stay out of smoke. Triple rinse or pressure rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 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. Pressure rinse as follows: Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 psi for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

Refillable containers larger than 5 gallons: 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 a mix tank. Fill the container about 10% full with water. Agitate vigorously or recirculate water with the pump for two minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times.

#### WARRANTY DISCLAIMER

The directions for use of this product must be followed carefully. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, (1) THE GOODS DELIVERED TO YOU ARE FURNISHED "AS IS" BY MANUFACTURER OR SELLER AND (2) MANUFACTURER AND SELLER MAKE NO WARRANTIES, GUARANTEES, OR REPRESENTATIONS OF ANY KIND TO BUYER OR USER, EITHER EXPRESS OR IMPLIED, OR BY USAGE OF TRADE, STATUTORY OR OTHERWISE, WITH REGARD TO THE PRODUCT SOLD, INCLUDING, BUT NOT LIMITED TO MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, USE, OR ELIGIBILITY OF THE PRODUCT FOR ANY PARTICULAR TRADE USAGE. UNINTENDED CONSEQUENCES, INCLUDING BUT NOT LIMITED TO INEFFECTIVENESS, MAY RESULT BECAUSE OF SUCH FACTORS AS THE PRESENCE OR ABSENCE OF OTHER MATERIALS USED IN COMBINATION WITH THE GOODS, OR THE MANNER OF USE OR APPLICATION, INCLUDING WEATHER, ALL OF WHICH ARE BEYOND THE CONTROL OF MANUFACTURER OR SELLER AND ASSUMED BY BUYER OR USER, THIS WRITING CONTAINS ALL OF THE REPRESENTATIONS AND AGREEMENTS BETWEEN BUYER, MANUFACTURER AND SELLER, AND NO PERSON OR AGENT OF MANUFACTURER OR SELLER HAS ANY AUTHORITY TO MAKE ANY REPRESENTATION OR WARRANTY OR AGREEMENT RELATING IN ANY WAY TO THESE GOODS.

#### LIMITATION OF LIABILITY

TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, IN NO EVENT SHALL MANUFACTURER OR SELLER BE LIABLE FOR SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES, OR FOR DAMAGES IN THEIR NATURE OF PENALTIES RELATING TO THE GOODS SOLD, INCLUDING USE, APPLICATION, HANDLING, AND DISPOSAL. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, MANUFACTURER OR SELLER SHALL NOT BE LIABLE TO BUYER OR USER BY WAY OF INDEMNIFICATION TO BUYER OR TO CUSTOMERS OF BUYER, IF ANY, OR FOR ANY DAMAGES OR SUMS OF MONEY, CLAIMS OR DEMANDS WHATSOEVER, RESULTING FROM OR BY REASON OF, OR RISING OUT OF THE MISUSE, OR FAILURE TO FOLLOW LABEL WARNINGS OR INSTRUCTIONS FOR USE, OF THE GOODS SOLD BY MANUFACTURER OR SELLER TO BUYER. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, ALL SUCH RISKS SHALL BE ASSUMED BY THE BUYER, USER, OR ITS CUSTOMERS. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, BUYER'S OR USER'S EXCLUSIVE REMEDY, AND MANUFACTURER'S OR SELLER'S TOTAL LIABILITY SHALL BE FOR DAMAGES NOT EXCEEDING THE COST OF THE PRODUCT.

If you do not agree with or do not accept any of the directions for use, the warranty disclaimers, or limitations on liability, do not use the product, and return it unopened to the Seller, and the purchase price will be refunded.

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