

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

OFFICE OF CHEMICAL SAFETY AND POLLUTION PREVENTION

3.26-13

Luz Chan Drexel Chemical Company 1700 Channel Ave. P.O. Box 13327 Memphis, TN 38113-0327

Subject:

Label Amendment / Drexel Imitator Plus

EPA Reg. No.: 19713-526

Dear Ms. Chan:

The amended labeling referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, is acceptable.

Submit one copy of the final printed label for the record before you release the product for shipment. A stamped copy of the label is enclosed for your records. This master label supersedes all previously accepted labels. If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA section 6(e). Your release for shipment of the product constitutes acceptance of these conditions. If you have any questions please call Erik Kraft at 703-308-9358 or email at Kraft.Erik@epa.gov.

Sincerely.

Kable "Bo" Davis Product Manager 25

Herbicide Branch

Registration Division (7505P)



GROUP 9 HERBICIDE



# **Imitator. Plus**

#### Herbicide

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

#### **ACTIVE INGREDIENT:**

Glyphosate in the form of its isopropylamine salt*	41.0%
OTHER INGREDIENTS:	59.0%
TOTAL:	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

See FIRST AID Below

**FIRST AID** 

EPA Reg. No. 19713-526 EPA Est. No. 19713-XX-XXX

**Net Content:** 

## IF IN EYES:

- Hold eye open and rinse slowly and gently with water for 15 to 20 minutes.
- Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.
- Call a poison control center or doctor for treatment advice.

## IF INHALED:

- · Move person to fresh air.
- If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-tomouth.
- Call a poison control center or doctor for further treatment advice.

#### IF SWALLOWED:

- Call a poison control center or doctor immediately for treatment advice.
- · Have person sip a glass of water if able to swallow.
- Do not induce vomiting unless told to do so by a poison control center or doctor.
- Do not give anything by mouth to an unconscious or convulsing person.

#### IF ON SKIN OR CLOTHING:

- Take off contaminated clothing.
- Rinse skin immediately with plenty of water for 15 to 20 minutes.
- Call a poison control center or doctor for treatment advice.

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. For information on this pesticide product (including health concerns, medical emergencies or pesticide incidents), call the National Pesticide Information Center at 1-800-858-7378.

526SP-0313\*P(PHI)

Manufactured By:



Page **1** of **69** 



Under the Federal insecticide, Fungicide, and Rodenticide Act, as amended, for the pesticide registered under EPA Reg. No. 19713-526

**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.

#### PRECAUTIONARY STATEMENTS

#### **Hazards To Humans And Domestic Animals**

**CAUTION:** Harmful if absorbed through skin, if inhaled, or if swallowed. Causes moderate eye irritation. Avoid breathing of spray mist. Avoid contact with skin, eyes, and clothing.

## PERSONAL PROTECTIVE EQUIPMENT (PPE)

Applicators and other handlers must wear: Long-sleeved shirt and long pants, shoes plus socks, and chemical-resistant gloves (such as natural rubber, Selection Category A).

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**

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

## **USER SAFETY RECOMMENDATIONS**

**Users should:** 1) Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet. 2) Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. 3) 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 cleaning equipment or disposing of equipment washwaters.

#### PHYSICAL AND 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 any manner inconsistent with its labeling. Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area at the time of application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

## AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard (WPS), 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 (REI). The requirements in this box only apply to uses of this product that are covered by the WPS. Do not enter or allow worker entry into treated area during the REI of 12 hours.

PPE required for early entry to treated area that is permitted under the WPS and that involves contact with anything that has been treated, such as plants, soil or water is: Coveralls, chemical-resistant gloves (Category A) such as butyl rubber, natural rubber, neoprene rubber or nitrile rubber >14 mils, shoes plus socks and protective eyewear.

## NON-AGRICULTURAL USE REQUIREMENTS

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

Do not enter or allow others to enter treated area until sprays have dried.

## **USE INFORMATION**

READ ENTIRE LABEL BEFORE USING THIS PRODUCT.

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

This product mixes readily with water to be applied as a foliar spray for the control or destruction of most herbaceous plants. It may be applied through most standard handheld or 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 visible 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.

Unemerged plants arising from unattached underground rhizomes or root stocks of perennials will not be affected by the herbicide and will continue to grow. For this reason, best control of most perennial weeds is obtained when treatment is made at late growth stages approaching maturity.

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 and perennial weeds that have been mowed, grazed or cut and have not been allowed to regrow to the listed 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 chemical 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.

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

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

**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 can cause severe damage or destruction to the crop, plants or other areas on which treatment was not intended. The likelihood of injury occurring from the use of this product is greatest when winds are gusty or in excess of 5 miles per hour, or when other conditions, including lesser wind velocities, will allow spray drift to occur. When spraying, avoid combinations of pressure and nozzle type that will result in splatter or fine particles (mist), which are likely to drift.

AVOID APPLYING AT EXCESSIVE SPEED OR PRESSURE.

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

## RESISTANCE MANAGEMENT

GROUP 9 HERBICIDE

This product is a Group 9 herbicide. Any weed population may contain or develop plants naturally resistant to this product and other Group 9 herbicides. Weed species with acquired resistance to Group 9 may eventually dominate the weed population if Group 9 herbicides are used repeatedly in the same field or in successive years as primary method of control for targeted species. This may result in partial or total loss of control of those species by this product or other Group 9 herbicides.

To delay herbicide resistance, consider:

- Avoiding the consecutive use of this product or other target site of action Group 9 herbicides that have a similar target site of action on the same weed species.
- Using tank mixtures or premixes with herbicides from different target site of action Groups as long as the involved products are all registered for the same use, have different sites of action, and are both effective at the tank mix or prepack rate on the weed(s) of concern.
- Basing herbicide use on a comprehensive IPM program.
- · Monitoring treated weed populations for loss of field efficacy.
- Contacting your local extension specialist, certified crop advisors and/or manufacturer for herbicide resistance management and/or integrated weed management recommendations for specific crops and resistant weed 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. DIRECT HANDGUN APPLICATIONS PROPERLY TO AVOID SPRAYING DESIRABLE PLANTS.

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

#### MIXING

This product mixes readily with water. Mix spray solutions of this product as follows: Fill the mixing or spray tank with the required amount of water. Add the specified amount of this product (see the "DIRECTIONS FOR USE" and "WEEDS CONTROLLED" sections of this label) near the end of the filling process and mix well. Remove hose from tank immediately after filling to avoid siphoning back into the carrier source. During mixing and application, foaming of the spray solution may occur. To prevent or minimize foam, avoid the use of mechanical agitators, terminate bypass and return lines at the bottom of the tank and, if needed, use an approved antifoam or defoaming agent.

#### **TANK MIXTURES**

This product may be tank mixed with the products listed, provided the product tank mixed is registered for use on the listed site.

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:

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

Maintain good agitation at all times until the contents of the tank are sprayed. If the spray mixture is allowed to settle, thorough agitation is required to resuspend the mixture before spraying is resumed. Keep bypass line on or near bottom of the tank to minimize foaming. Screen size in nozzle or line strainers should be no finer than 50-mesh. 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.

#### **ADDITIVES**

**Surfactants:** Nonionic surfactants that are labeled "for use with herbicides" may be used. Do not reduce rates of this product when adding surfactant. When adding additional surfactant, follow manufacturer's rates and recommendations for use of the surfactant, OR, use 0.5% surfactant concentration (2 quarts per 100 gallons of spray solution) when using surfactants that contain at least 70% active ingredient or a 1% surfactant concentration (4 quarts per 100 gallons of spray solution) for those surfactants containing less than 70% active ingredient. Read and carefully observe surfactant cautionary statements and other information appearing on the surfactant label.

Ammonium Sulfate: The addition of 1 to 2% 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, Banvel® or residual herbicide tank mixtures on annual and perennial weeds. The improvement in performance may be apparent where environmental stress is a concern. Low quality ammonium sulfate may contain material that will not readily dissolve, which could result in nozzle tip plugging. To determine quality, perform a jar test by adding 0.33 cup of ammonium sulfate to 1 gallon of water and agitate for 1 minute. If undissolved sediment is observed, pre-dissolve the ammonium sulfate in water and filter prior to addition to the spray tank. 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. Do not use herbicide rates lower than what is specified in this label.

**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 recommendations.

#### 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)** — Handheld or boom-mounted applicators that produce a spray consisting of a narrow range of droplet sizes.

Handheld and High-volume Spray Equipment — Knapsack and backpack sprayers, pump-up pressure sprayers, handguns, handwands, mistblowers\*, lances and other handheld and motorized spray equipment used to direct the spray onto weed foliage.

\*THIS PRODUCT IS NOT REGISTERED IN CA OR AZ FOR USE IN MISTBLOWERS.

**Selective Equipment** — Recirculating sprayers, shielded 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 3 to 15 gallons of water per acre unless otherwise specified on this label. See the "WEEDS CONTROLLED" section of this label for specific 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, preharvest, silvicultural sites and rights-of-way. Refer to the individual use area sections of this label for volumes and application rates. 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 that 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 GEARS ARE MOST SUSCEPTIBLE. The maintenance of an organic coating (paint), which meets aerospace specification MIL-C-38413, may prevent corrosion.

THIS PRODUCT PLUS OUST®, BANVEL OR 2,4-D TANK MIXTURES MAY NOT BE APPLIED BY AIR IN CA.

#### **AERIAL APPLICATION IN CALIFORNIA**

Avoid contact of herbicide with foliage, green stems, exposed non-woody roots or fruit of crops (except as specified for individual Roundup Ready<sup>®</sup> crops), desirable plants and trees, because severe injury or destruction may result.

See "USE INFORMATION" and "MIXING, ADDITIVES AND APPLICATION INSTRUCTIONS" sections for essential product performance information.

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

#### **Aerial Equipment**

Avoid drift. Do not apply when winds are gusty or under any other condition which favors drift. Drift may cause damage to any vegetation contacted to which treatment is not intended. To prevent injury to adjacent desirable vegetation, appropriate buffer zones must be maintained.

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

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

Coarse sprays are less likely to drift, therefore, do not use nozzles or nozzle configurations that 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 streaking, uneven, or over-lapped 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-C38413 may prevent corrosion.

#### **Crop Uses**

Read and follow the specific labeling instructions for each crop.

Utilize allowable application rates and timing limitations that pertain to your specific cropping system and stage growth.

Aerial applications of this product are allowed in the following situations:

- 1. In fallow and reduced tillage systems prior to the emergence or transplanting of labeled crops.
- 2. In Alfalfa and Pasture renovation applications.
- 3. Over-the-top applications in Corn and Cotton with the Roundup Ready gene.
- 4. Pre-harvest in Alfalfa, Corn, Cotton, Wheat, Corn with the Roundup Ready gene, and Cotton with the Roundup Ready gene.

Refer to the individual crop section on this label for specific application instructions for each crop.

Do not plant subsequent crops other than those listed in the label booklet for 30 days following application.

When applied under the conditions described, this product controls annual and perennial weeds listed in this label.

Use the specified rates of this product in 3 to 15 gallons of water per acre.

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

#### **BROADCAST EQUIPMENT**

For control of annual or perennial weeds listed on this label using broadcast equipment — Use the specified rates of this product in 3 to 40 gallons of water per acre as a broadcast spray unless otherwise specified on this label. See the "WEEDS CONTROLLED" section of this label for specific rates. As density of weeds increases, increase spray volume within the specified range to ensure complete coverage. Carefully select proper nozzle to avoid spraying a fine mist. For best results with ground application equipment, use flat fan nozzles. Check for even distribution of spray droplets.

## CONTROLLED DROPLET APPLICATION (CDA)

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

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

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

## HANDHELD 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 not spray to the point of runoff. For control of annual weeds listed on this label, apply a 0.5% solution of this product plus nonionic surfactant to weeds less than 6 inches in height or runner length. Apply prior to seed-head formation in grass or bud formation in broadleaf weeds. 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% solution. For best results, use a 2% solution on harder-to-control perennials, such as Bermudagrass, Canada thistle, Dock, Field bindweed, Hemp dogbane and Milkweed.

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

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

,		SPRAY	SOLUTION			
	Amount of This Product					
Desired Volume	0.5%	1%	1.5%	2%	5%	10%
1 Gal.	0.66 fl. oz.	1.33 fl. ozs.	2 fl. ozs.	2.66 fl. ozs.	6.5 fl. ozs.	13 fl. ozs.
25 Gals.	1 pt.	1 qt.	1.5 qts.	2 qts.	5 qts.	10 qts.
100 Gals.	2 qts.	1 gal.	1.5 gals.	2 gals.	5 gals.	10 gals.
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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.

#### SELECTIVE EQUIPMENT

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

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

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

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

AVOID CONTACT WITH DESIRABLE VEGETATION.

Contact of the herbicide solution with desirable vegetation may result in damage or destruction. Adjust applicators 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.

Make applications above the crops 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 treatments 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 (inches)
Row width (inches)

Broadcast RATE per acre = Broadcast VOLUME of =

Band RATE per acre Band VOLUME of solution per acre

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.

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

#### Wiper Applicators and Sponge Bars

Wiper applicators are devices that physically wipe appropriate amounts of this product directly onto the weed. Equipment must be designed, maintained and operated to prevent the herbicide solution from contacting desirable vegetation. Operate this equipment at ground speeds no greater than 5 mph. Performance may be improved by reducing speed in areas of heavy weed infestations to ensure adequate wiper saturation. Better results may be obtained if 2 applications are made in opposite directions. Avoid leakage or dripping onto desirable vegetation. Adjust height of applicator to ensure adequate contact with weeds. Keep wiping surfaces clean. Be aware that, on sloping ground, the herbicide solution may migrate causing dripping on the lower end and drying of the wicks on the upper end of a wiper applicator.

Do not use wiper equipment when weeds are wet.

Mix only the amount of solution to be used during a 1-day period, as reduced activity may result from use of leftover solutions. Clean wiper parts immediately after using this product by thoroughly flushing with water. Do not add surfactant to the herbicide solution.

For rope or sponge wick applicators — Mix 1 gallon of this product in 2 gallons of water to prepare a 33% solution. Apply this solution to weeds listed in this "Wiper Applicators" section.

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

When applied under the conditions described for "Wiper Applicators", this product CONTROLS the following weeds:

	Annual Grasses
Corn (Volunteer) Zea mays Panicum, Texas Panicum texanum	Rye, common Secale cereale Shattercane Sorghum bicolor
	Annual Broadleaves
Sicklepod Cassia obtusifolia Spanishneedles Bidens bipinnata	Starbur, bristly Ascanthospermum hispidum

When applied under the conditions described for "Wiper Applicators", this product SUPPRESSES the following weeds:

Annual Broadleaves			
Beggarweed, Florida	Ragweed, giant		
Desmodium tortuosum	Ambrosia trifida		
Dogfennel	Sunflower		
Eupatorium capilliflorium	Helianthus annuus		
Pigweed, redroot	Thistle, musk		
Amaranthus retroflexus	Carduus nutans		
Ragweed, common	Velvetleaf		
Ambrosia artemisiifolia	Abutilon theophrasti		
Perennial C	Grasses		
Bermudagrass	Smutgrass		
Cynodon dactylon	Sporobolus poiretii		
Guineagrass Vaseygrass			
Panicum maximum	Paspalum urvillei		
Johnsongrass			
Sorghum halepense	·		
Perennial Broadleaves			
Dogbane, hemp	Nightshade, silverleaf		
Apocynum cannabinum	Solanum elaeagnifolium		
Milkweed	Thistle, Canada		
Asclepias syriaca	Cirsium arvense		

## **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.
- Make applications prior to seedhead formation to prevent seed production,.
- 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. Applied in water carrier volumes of 3 to 10 gallons per acre for ground applications and 3 to 5 gallons per acre for aerial applications. (See the "AERIAL EQUIPMENT" section of this label for approved sites.)
- 2. A nonionic surfactant is added at 0.5 to 1% by total spray volume. Use 0.5% surfactant concentration when using surfactants which contain at least 70% active ingredient or a 1% surfactant concentration for those surfactants containing less than 70% active ingredient.

#### Notes:

- The addition of 2% 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*
	(inches)	(fl. ozs.)
Foxtail	12	8
Setaria spp		
Barnyardgrass	6	12
Echinochloa crus-galli	0 to 4	16 <sup>1</sup>
Bluegrass, annual	4 to 6	24 <sup>1</sup>
Poa annua		
Brome, downy**		
Bromus tectorum		
Mustard, blue		
Chorispora tenella		
Mustard, tansy		
Descurainia pinnata		
Mustard, tumble		
Sisymbrium altissimum		
Mustard, wild		
Brassica kaber		
Spurry, umbrella		
Holosteum umbellatum		
Barley	12	12
Hordeum vulgare		
Rye		
Secale cereale	·	
Sandbur, field		
Cenchrus spp.		
Shattercane	1	
Sorghum bicolor		
Stinkgrass		
Eragrostis cilianensis		
Wheat	18	12
Triticum aestivum		
Morningglory	2	16
Ipomoea spp.		
Sicklepod		
Cassia obtusifolia		
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Weed Species	Maximum Height/Length	Rate Per Acre*
	(inches)	(fl. ozs.)
Bluegrass, bulbous	6	16
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 bursapastoris		
Spurge, annual		
Euphorbia spp.		
Buttercup	12	16
Ranunculus spp.	-	
Cocklebur		
Xanthium strumarium		
Crabgrass		•
Digitaria spp.		
Dwarfdandelion		•
Krigia cespitosa		
Falseflax, smallseed		
Camelina microcarpa		
Foxtail, Carolina		
Alopecurus carolinianus	·	
Johnsongrass, seedling		
Sorghum halepense		
		•
Oats, wild Avena fatua		
Panicum, fall		
Panicum dichotomiflorum		(continue

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Weed Species	Maximum Height/Length	Rate Per Acre*
	(inches)	(fl. ozs.)
Panicum, Texas	12	16
Panicum texanum		
Pigweed, redroot		
Amaranthus retroflexus		
Pigweed, smooth		
Amaranthus hybridus		
Witchgrass		
Panicum capillare		
Sicklepod	3 to 4	- 24
Cassia obtusifolia		
Signalgrass, broadleaf	4	24
Brachiaria platyphylla		
Horseweed, marestail	7 to 12	24
Conyza canadensis		
Lambsquarters, common		
Chenopodium album	•	
Spurge, annual	·	
Euphorbia spp.		
Rice, red	4	32
Oryza sativa		
Teaweed		
Sida spinosa		
Sprangletop	6	32
Leptochloa spp.	12	. 48
Geranium, Carolina	12	32
Geranium carolinianum		
Goosegrass		
Eleusine indica		
Primrose, cutleaf evening		
Oenothera laciniate		
Pusley, Florida		
Richardia scabra		
Sicklepod	5 to 12	32
Cassia obtusifolia		
Spanishneedles		
Bidens bipinnata		
Filaree	12	48
Erodium spp.		-
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Use these rates to control Barnyardgrass in AL, AR, MO, MS, LA and TX for preplant treatments.

## **Tank Mixtures**

This product may be tankmixed with the products listed, provided the product tankmixed is registered for use on the listed site.

## This Product plus Banvel plus nonionic surfactant

This Product plus 2,4-D plus nonionic surfactant

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

Use these tank mixtures in fallow and reduced tillage areas only. Follow use directions as given in the "Low-Volume Broadcast Application" section.

This product plus Banvel 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.

<sup>\*</sup> For those rates less than 32 ft. ozs. per acre, this product at rates up to 32 ft. ozs. per acre may be used where heavy weed densities exist.

<sup>\*\*</sup> For control in no-tillage systems, use 16 fl. ozs. per acre

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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 cautionary statements for all products used in tank mixtures. Some crop injury may occur if Banvel is applied within 45 days of planting. The addition of Banvel 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 active ingredient of Banvel or 0.5 pound active ingredient of 2,4-D, plus 0.5 to 1% 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 inches)

Xanthium strumarium

Horseweed/Marestail (6 inches)

Conyza canadensis

Kochia\* (6 inches) Kochia scoparia

Lambsquarters (12 inches)

Chenopodium album

Lettuce, prickly (6 inches)

Lactuca serriola

\* Controlled with Banvel tank mixture only.

Morningglory (6 inches)

Ipomoea spp.

Pigweed, redroot (12 inches)

Amaranthus retroflexus

Pigweed, smooth (12 inches)

Amaranthus hybridus

Thistle, Russian (12 inches)

Salsola kali

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

Ragweed, common	Smartweed, Pennsylvania
Ambrosia artemisiifolia	Polygonum pensylvanicum
Ragweed, giant	Velvetleaf
Ambrosia trifida	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 to 40 gallons per acre for ground applications.

Apply 1 to 1.5 quarts of this product per acre plus 0.5 to 1% nonionic surfactant by total spray volume. 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 the listed stages prior to treatment. These rates will also provide control of weeds listed in the "Low-Volume Broadcast Application" section.

	Weed Species	
Balsamapple*	Panicum	
Momordica charantia	Panicum spp.	
Bassia, fivehook	Ragweed, common	
Bassia hyssopifolia	Ambrosia artemisiifolia	
Brome	Ragweed, giant	
Bromus spp.	Ambrosia trifida	
Fiddleneck	Smartweed, Pennsylvania	
Amsinckia spp.	Polygonum pensylvanicum	
Fleabane, hairy	Sowthistle, annual	
Conyza bonariensis	Sonchus oleraceus	
Fleabane	Sunflower	
Erigeron spp.	Helianthus annus	•
Kochia	Thistle, Russian	
Kochia scoparia	Salsola kali	
Lettuce, prickly	Velvetleaf	
Lactuca serriola	Abutilon theophrasti	

#### PERENNIAL WEEDS

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

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

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

The addition of 1 to 2% dry ammonium sulfate by weight or 8.5 to 17 pounds per 100 gallons of water may increase the performance of this product on perennial weeds. The improvement in the performance may be apparent where environmental stress is a concern. Refer to the "MIXING, ADDITIVES AND APPLICATION INSTRUCTIONS" section of this label.

When applied 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.

**Bermudagrass** 

Cynodon dactylon

Bermudagrass, water (Knotgrass)

Paspalum distichum

Bindweed, field

Convolvulus arvensis

Bluegrass, Kentucky

Poa pratensis

Blueweed, Texas

Helianthus ciliaris

Brackenfern

Pteridium aquilinum

Bromegrass, smooth

Bromus inermis

Bursage, woollyleaf

Franseria tomentosa

Canarygrass, reed

Phalaris arundinacea

Cattail

Typha spp.

Clover, red

Trifolium pratense

Clover, white

Trifolium repensa

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

Acmoracia rusticana

Ice plant

Mesembryanthemum crystallinum

**Johnsongrass** 

Sorghum halepense

Kikuyugrass

Pennisetum clandestinum

Knapweed

Centaurea repens

Lantana

Lantana camara

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

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**Pampasgrass** Cortaderia spp. **Paragrass** 

Brachiaria mutica

Phragmites\* Phragmites spp.

Poison hemlock Conium maculatum

Quackgrass Elytrigia repens

Redvine\*

Brunnichia ovata

Reed, giant Arundo donax Ryegrass, perennial Lolium perenne

Smartweed, swamp Polygonum coccineum

Spurge, leafy\* Euphorbia esula

\*Partial control

Sweet potato, wild\* Ipomoea pandurata Thistle, Canada

Starthistle, yellow

Centaurea solstitalisi

Cirsium arvense

Thistle, artichoke Cvnara cardunculus

**Timothy** 

Phleum pratense

Torpedograss\* Panicum repens

Trumpetcreeper\* Campsis radicans

Vasevarass Paspalum urvillei

Velvetgrass Holcus spp.

Wheatgrass, western Agropyron smithii

THIS PRODUCT IS NOT REGISTERED IN CA 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% 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. Follow application 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% solution with handheld 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% 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 quarts of this product plus 0.5 to 1% nonionic surfactant by total spray volume in 10 to 20 gallons of water per acre. Ensure entire crown area has resumed growth prior to Fall applications. Bentgrass should be actively growing and have at least 3 inches of growth. Avoid tillage prior to treatment. For best results, till 7 to 10 days after application. 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% 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.

Fall applications only - Apply 1 quart of this product plus 0.5 to 1% nonionic surfactant by total spray volume in 5 to 10 gallons of water per acre. Till fallow fields 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 active ingredient of Banvel 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 CA) in fallow and reduced tillage systems only.

For suppression on irrigated agricultural land, apply 1 to 2 quarts of this product plus 1 pound active ingredient of 2,4-D in 10 to 20 gallons of water per acre with ground equipment only. Apply 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 active ingredient of 2,4-D plus 0.5 to 1% 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 has occurred and when vines are between 6 to 18 inches in length.

In CA 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% 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% 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% 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 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% solution with handheld 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 Banvel per acre. For partial control, apply 1 quart of this product plus 1 pint of Banvel per acre. Add 0.5 to 1% 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% 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 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 2,4-D plus 0.5 to 1% 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. Allow 7 or more days after application before tillage. For best results, apply in late Summer or Fall. For suppression, apply 16 fluid ounces of this product plus 0.5 pound active ingredient 2,4-D plus 0.5 to 1% 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% 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 qts. of this product per acre or use a 1% solution with handheld equipment. Apply to actively growing Guineagrass when most have reached at least the 7-leaf stage of growth. Ensure thorough coverage when using handheld equipment. Allow 7 or more days after application before tillage.

Johnsongrass, Ryegrass (Perennial) — Apply 1 to 3 quarts of this product per acre or as a 1% solution with handheld equipment. 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% 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 noncrop 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 tankmix 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% 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.

For spot treatment (partial control or suppression) – Apply a 1% solution of this product plus 0.5 to 1% 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 to Fall. Allow 7 or more days after application before tillage.

**Lantana** — Apply this product as a 1 to 1.25% solution using handheld 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 Milkweed 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% 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 noncrop areas. Spray when 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 tankmix 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% nonionic surfactant by total spray volume in 3 to 10 gallons of water per acre. Apply when at least 60% 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% 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% 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% 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% solution using handheld equipment. Apply to plants that are actively growing at or beyond the boot stage of growth. Thorough coverage is necessary for best control.

Phragmites — For partial control of Phragmites in FL and the counties of other states bordering the Gulf of Mexico, apply 5 quarts per acre as a broadcast spray or apply as a 2% solution from handheld equipment. In other areas of the U.S., apply 3 quarts per acre as a broadcast spray or apply a 1% solution from handheld 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 uneven stages of growth or the dense nature of the vegetation, which may prevent good spray coverage, repeat treatments may be necessary to maintain control. Visible symptoms of control 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% 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 tankmix 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 — In pasture or sod or other noncrop 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 the specified rates in 5 to 10 gallons of water per acre plus 0.5 to 1% 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% 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% 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% 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% 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% solution using handheld equipment. Apply to actively growing weeds that are at or beyond the bloom stage of growth. Repeat applications will be required. Allow the plant to reach the listed 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 active ingredient 2,4-D per acre, plus 0.5 to 1% 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 and 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 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 the early head to early bud stage of growth. Allow 7 or more days after application before tillage.

#### **WOODY BRUSH AND TREES**

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

Alder

Alnus spp.

Ash\*

Fraxinus 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 Cytsis scoparius

Buckwheat, California\*

Eriogonum fasciculatum

Cascara\*

Rhamnus purshiana

Catsclaw\*

Acacia areggi

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.

(continued)

(continuation)

Hornbeam, American\*

Carpinus caroliniana

Kudzu

Pueraria lobata

Locust, black\*

Robinia pseudoacacia

Madrone

Arbutus menziesii

Manzanita

Arctostaphylos spp.

Maple:

Red\*\* Acer rubrum

Sugar Acer saccharum

Vine\* Acer circinatum

Monkey flower\*

Mimulus guttatus

Oak

Black\* Quercus velutina

Northern Pine 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, vellow\* (Tulip tree)

Liriodendron tulipifera

Raspberry

Rubus spp.

Redbud, Eastern

Cercis canadensis

Rose Multiflora

Rosa multiflora

Russian olive\*\*\*

Elaegnus angustifolia

Sage Black, White

Salvia spp.

Sagebrush, California

Artemisia californica

Salmonberry

Rubus spectabilis

Saltcedar

Tamarix spp.

Sassafras

Sassafras albidum

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.

\* Partial Control

\*\* See the following section for control or partial control instructions.

\*\*\* THIS PRODUCT IS NOT REGISTERED IN CA 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 listed 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 the 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 handheld equipment. Symptoms may not appear prior to frost or senescence with Fall treatments.

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

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:

Alderberry, 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% solution with handheld 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% solution with handheld equipment.

**Birch, Elderberry, Hazel, Salmonberry, Thimbleberry** — For control, apply 2 quarts per acre of this product as a broadcast spray or as a 1% solution with handheld equipment.

**Blackberry** — For control, apply 3 to 4 quarts per acre of this product as a broadcast spray or 1 to 1.5% solution with hand held equipment. Make application after plants have reached full leaf maturity. Best results are obtained when applications are made in the late Summer or Fall. After berries have set or dropped in late Fall, Blackberries can be controlled by applying a 0.75% solution of this product plus 0.5 to 1% nonionic surfactant by total spray volume with handheld 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% solution with handheld equipment.

**Buckwheat (California), Hasardia, Monkey flower, Tobacco (Tree)** — For partial control of these species, apply a 1 to 2% solution of this product as a foliar spray with handheld equipment. Thorough coverage of foliage is necessary for best results.

Catsclaw — For partial control, apply a 1 to 1.5% solution with handheld equipment.

**Coyote brush** — For control, apply a 1.5 to 2% solution with handheld equipment when at least 50% of the new leaves are fully developed.

**Eucalyptus** — For control of Eucalyptus resprouts, apply a 2% solution with handheld 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% solution with handheld equipment. Repeat applications will be required to maintain control.

**Madrone resprouts** — For suppression or partial control, apply a 2% 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% solution with handheld equipment when at least 50% 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% solution with handheld equipment when at least 50% of the new leaves are fully developed.

**Poison ivy, Poison oak** — For control, apply 4 to 5 quarts of this product per acre as a broadcast spray or as a 2% 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% solution with handheld equipment. Treat prior to leaf deterioration by leaf-feeding insects.

Sage (Black), Sagebrush (California), Chamise, Tallowtree (Chinese) — For control of these species, apply a 1% solution of this product as a foliar spray with handheld equipment. Thorough coverage of foliage is necessary for best results.

**Tan oak resprouts** — For suppression or partial control, apply a 2% 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% solution with handheld 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% solution with handheld equipment.

#### **NONCROP USES**

See "USE INFORMATION" and "MIXING, ADDITIVES AND APPLICATION INSTRUCTIONS" sections of this label for essential product performance information and the following "NONCROP" sections for specific uses. EXTREME CARE MUST BE EXERCISED TO AVOID CONTACT OF SPRAY WITH FOLIAGE, GREEN STEMS, EXPOSED NON-WOODY ROOTS OR FRUIT OF CROPS, DESIRABLE TURFGRASSES, TREES, SHRUBS OR OTHER DESIRABLE VEGETATION SINCE SEVERE DAMAGE OR DESTRUCTION MAY RESULT.

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

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

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

## INDUSTRIAL, RECREATIONAL AND PUBLIC AREAS

When applied as directed for "NONCROP USES", under conditions described, this product controls annual and perennial weeds listed on this label growing in areas including airports, ditchbanks, dry ditches, dry canals, fencerows, golf courses, highways, industrial plant sites, lumberyards, parking areas, parks, petroleum tank farms and pumping installations, pipelines, power and telephone rights-of-way, railroads, roadsides, schools, storage areas, utility substations.

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

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

## Tank Mixtures for Industrial and Forestry Site Preparations This product plus Oust

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

This tank mixture may also be used as a site preparation treatment for sites to be planted to Jack pine, Loblolly pine, Red pine, Slash pine and Virginia pine. When applied as directed for "NONCROP USES" under the conditions described, this product plus Oust provides control of annual weeds listed in the "WEEDS CONTROLLED" section of the label for this product and Oust, and control or partial control of the following perennial weeds.

Apply 1 to 2 quarts of this product with 2 to 4 ounces of Oust in 10 to 40 gallons of spray solution per acre as a broadcast spray to actively growing weeds. This mixture may be applied by aerial equipment in site prep operations. When applied by air, use the specified rates in 5 to 15 gallons of spray solution per acre.

THIS PRODUCT PLUS OUST TANK MIXTURES MAY NOT BE APPLIED BY AIR IN CA.

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

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

For partial control, use the lower rates.

Johnsongrass\*\* **Bahiagrass** Paspalum notatum Sorghum halepense Bermudagrass\* Poorjoe\*\* Diodia teres Cynodon dactylon Broomsedge Quackgrass Andropogon virginicus Elvtrigia repens Trumpetcreeper\* Dock, curly Rumex crispus Campsis radicans Vaseygrass Dogfennel Eupatorium capillifolium Paspalum urvillei Fescue, tall Vervain, blue Festuca arundinacea Verbena hastata \* Suppression at higher rates only. \*\* Control at the lower rates.

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

#### Tank Mixtures for Noncrop Sites

This product may be tankmixed with the products listed, provided the product tankmixed is registered for use on the listed site.

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

## This product...

plus Diuron plus Simazine 90DF plus Krovar®I plus Simazine 4L plus Krovar II plus Surflan™ 75W plus Ronstar™ 50WP plus Surflan AS

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

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

#### **Control of Emerged Weeds**

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

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

#### **Preemergence Weed Control**

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

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

Apply these tank mixtures through conventional broadcast equipment only.

#### **FARMSTEAD WEED CONTROL**

When applied as directed for "NONCROP USES", under conditions described, this product controls undesirable vegetation listed on this label around farmstead building foundations, along and in fences, shelterbelts and for general 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.

#### **Farm Ditches**

This product will suppress perennial grasses along farm ditches. Apply this product at a rate of 6 to 8 fluid ounces per acre. Use 8 fluid ounces per acre when treating Tall (coarse) fescue, Fine fescue, Orchardgrass or Quackgrass covers.

For best suppression of these species, add ammonium sulfate at a rate of 1.7 pounds per 10 gallons of spray solution. Use 6 fluid ounces per acre without ammonium sulfate when treating Kentucky bluegrass.

Apply treatments in 10 to 20 gallons of spray solution per acre to actively growing perennial grass covers.

For best spray distribution and coverage, use flat fan nozzles.

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

Where broadleaf weed control or suppression is desired, tankmix this product with the 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 fluid 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.

#### HABITAT MANAGEMENT

This product can be used for the restoration and/or maintenance of native habitats and in wildlife management areas. Apply as directed in the "NONCROP 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 selectively to remove unwanted plants for habitat maintenance and enhancement. For spot treatments, exercise care 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.

#### ORNAMENTALS 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 "NONCROP USES", this product controls undesirable vegetation listed on this label prior to planting, within and around greenhouses and shade-houses, and as a postdirected spray around established ornamentals and Christmas trees.

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

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

#### Site Preparation

Following preplant applications of this product, any ornamental or Christmas tree species may be planted. Take precautions to protect non-target plants during site preparation applications.

#### Greenhouse/Shadehouse Use

This product may be used to control weeds listed on this label that are growing inside 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 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

Thuja spp.

Azalea

Rhododendron spp.

Boxwood Buxus spp.

Crabapple

Malus spp. Douglas fir

Pseudotsuga spp.

**Euonymus** 

Euonymus spp.

Fir

Abies spp.

Holly

llex spp.

Jojoba

Simmondsia chinensis

Lilac

Syringa spp.

Magnolia

Magnolia spp.

Maple

Acer spp.

Oak

Quercus spp.

Privet

Ligustrum spp.

Pine

Pinus spp.

Spruce

Picea spp.

Yew

Taxus spp.

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

Note: DO NOT USE THIS PRODUCT AS AN OVER-THE-TOP BROADCAST SPRAY IN SILVICULTURAL NURSERIES.

When applied as directed for "NONCROP USES" under conditions described, this product controls undesirable vegetation listed on this label. This product also suppresses or controls undesirable vegetation listed on this label when applied at specified rates for release of established Coniferous species listed on this label.

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

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

#### **Aerial Application**

This product may be applied using aerial spray equipment for silvicultural site preparation, Conifer release 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 CA.

To reduce the aerial application drift hazard to aquatic sites\*, to non-target sites or any site containing desirable vegetation, always maintain appropriate buffer zones. Maintain a buffer zone of the following minimum distances:

- Maintain at least a 50-foot buffer zone for helicopters using a Microfoil<sup>™</sup> boom, a Thru-Valve<sup>™</sup> boom (TVB-45) or equivalent drift control systems.
- When using other aerial equipment:
- 1. Maintain at least a 75-foot buffer zone for applications using 2 quarts or less per acre of this product.
- 2. Maintain at least a 125-foot buffer zone for applications using more than 2 quarts per acre of this product.
- 3. Maintain at least a 400-foot buffer zone for applications on rights-of-way when applied from 75 feet or more above ground level.

Increase these distances if conditions favoring drift exist.

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

#### Site Preparation

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

## Postdirected Spray

In established silvicultural sites, use 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.

#### Conifer Release

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

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

For release of the following Conifer species:

Douglas fir	Pine*
Pseudotsuga menziesii	Pinus spp.
Fir	Spruce
Abies spp.	Picea spp.
Hemlock	
Tsuga spp.	
* Includes all species except Eastern white pine, Lo	blolly pine or Slash pine.

Apply 1.5 to 2 quarts of this product per acre except in WA and OR, West of the crest of the Cascade Mountains. For Spring treatments West of the crest of the Cascade Mountains, apply 1 quart of this product per acre before Conifer bud swell for control of annual weeds. For Fall treatments in WA and OR, West of the crest of the Cascade Mountains, apply 1 to 1.5 quarts of this product per acre before any major leaf drop of deciduous species.

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

For release of the following Conifer species:

Loblolly pine	Eastern white pine	Slash pine
Pinus taeda	Pinus strobus	Pinus elliottii

Late season application — Apply 1.5 to 2 quarts of this product in a minimum of 5 gallons of spray solution per acre in early autumn. Applications made prior to September 1 or when conditions are conducive to rapid growth of Conifers will create the potential for increased injury in the form of tip and/or needle burn. Injury may decrease with later applications. Some autumn colors are acceptable at the time of applications. Apply prior to frost or leaf drop of undesirable plants. Applications made according to label directions will release Loblolly pine, Eastern white pine and Slash pine by reducing competition from the following species:

Ash Persimmon Fraxinus spp. Diospyros spp. Cherry: Poplar, yellow (Tulip tree) Black Prunus serotina Liriodendron tulipfera Pin Prunus pensylvanica Sassafras Elm Sassafras albidum Ulmus spp. Sourwood Hawthorn Oxydendrum arboreum Crataegus spp. Sumac: Locust, black Poison Rhus vemix Robina pseudoacacia Smooth Rhus glabra Maple, red Winged Rhus copallina Acer rubra Sweetaum Oak: Liquidambar styraciflua Black Quercus velutina Post Quercus stellata Southern red Quercus falcata White Quercus alba

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

## This Product Plus Oust Tank Mixtures for Conifer Release from Herbaceous Weeds

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

Apply 16 to 24 fluid ounces of this product with 2 to 4 ounces of Oust in 10 to 30 gallons of spray solution per acre. Make application to actively growing weeds as a broadcast spray over the top of the young Loblolly pines. THIS PRODUCT PLUS OUST TANK MIXTURES MAY NOT BE APPLIED BY AIR IN CA.

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

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

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

Bahiagrass	Johnsongrass*	
Paspalum notatum	Sorghum halepense	
Broomsedge	Poorjoe*	
Andropogon virginicus	Diodia teres	
Dock, curly	Trumpetcreeper**	
Rumex crispus	Campsis radicans	
Dogfennel	Vaseygrass	
Eupatorium capilliforium	Paspalum urvillei	
Fescue, tall	Vervain, blue	
Festuca arundinacea	Verbena hastata	
* Control at the higher rates.		
** Suppression at higher rates only.		

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

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

**Note to User:** This product must not be used in areas where adverse impact on Federally designated endangered/threatened plant or aquatic species are likely.

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

#### **CUT STUMP TREATMENTS**

Woody vegetation may be controlled by treating freshly cut stumps of trees and resprouts with this product. Apply this product using suitable equipment to ensure coverage of the entire cambium. Cut vegetation close to the soil surface.

Apply a 50 to 100% solution of this product to the freshly cut surface immediately after cutting. Delays in application may result in reduced performance. For best results, apply 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	Oak	Sweetgum
Alnus spp.	Quercus spp.	Liquidambar styraciflua
Eucalyptus	Reed, Giant	Tan oak
Eucalyptus spp.	Arundo donax	Lithocarpus densiflorus
Madrone	Saltcedar	Willow
Arbutus menziesii	Tamarix spp.	Salix spp.

#### INJECTION AND FRILL APPLICATIONS

Woody vegetation may be controlled by injection or frill application of this product. Apply this product using suitable equipment that must penetrate into living tissue. Apply the equivalent of 1 milliliter of this product per each 2 to 3 inches of trunk diameter (DBH). This is best achieved by applying a 50 to 100% 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, apply during periods of active growth and after full leaf expansion.

This treatment WILL CONTROL the following woody species:

Oak	Poplar	Sweetgum	Sycamore
Quercus spp.	Populus spp.	Liquidambar styraciflua	Platanus occidentalis

This treatment WILL SUPPRESS the following woody species:

Black gum	Dogwood	Hickory	Maple, Red
Nyssa sylvatica	Cornus spp.	Carya spp.	Acer rubrum

## TURFGRASSES AND GRASSES FOR SEED PRODUCTION

**Preplant and Renovation** 

When applied as directed for "NONCROP USES", under conditions described, this product controls most existing vegetation prior to the planting and 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. Delay tillage or renovation techniques such as vertical mowing, coring or slicing for 7 days after application to allow proper translocation into underground plant parts.

**Turfgrasses:** Where existing vegetation is growing in a field or unmowed situation, apply this product to actively growing weeds at the stages of growth listed in the "WEEDS CONTROLLED" section of this label. Where existing vegetation is growing under mowed Turfgrass management, apply this product after omitting at least one regular mowing to allow sufficient growth for good interception of the spray. Desirable Turfgrasses may be planted following the above procedure.

**Grasses for Seed Production:** Apply this product to actively growing weeds at the stages of growth in the "WEEDS CONTROLLED" section of this label prior to planting or renovation of Turf or Forage grass areas grown for seed production. DO NOT feed or graze treated areas within 8 weeks after application.

#### Annual Weed Control in Dormant Bermudagrass and Bahiagrass Turf

When applied as directed for "NONCROP 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 "Weeds Controlled or Suppressed with This Product Alone" under the "RELEASE OF BERMUDAGRASS OR 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 Oust 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 Oust only on railroads, highways, utility plant sites or other rights-of-way areas.

When applied as directed for "NONCROP 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 tankmixed with Oust for residual control. Make applications to dormant Bermudagrass or Bahiagrass. Tank mixtures of this product plus Oust may delay greenup. To avoid delays in greenup and minimize injury, do not add more than 1 ounce per acre of Oust on Bermudagrass or more 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**

Rates specified 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 10 to 25 gallons of water, plus 0.5 to 1% nonionic surfactant by total spray volume per acre.

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

Weeds Controlled or Suppressed with 1				ct (fl. ozs./A)		
Weed Species	8	12	16	24	32	64
Barley, little	S	C	C	c c	C	C
Hordeum pusilium		_				_
Bedstraw, catchweed	S	С	С	С	С	С
Galium aparine						
Bluegrass, annual	S	С	С	С	С	С
Poa annua	•					
Chervil	S	С	С	С	С	С
Chaerophyllum tainturieri	·					
Chickweed, common	S	С	С	С	С	С
Stellaria media						
Clover, crimson		S	S	С	С	С
Trifolium incarnatum					,	
Clover, large hop		S	S	С	С	С
Trifolium campestre						
Fescue, tall					S	S
Festuca arundinacea				·		
Geranium, Carolina			S	S	С	С
Geranium carolinianum						<u> </u>
Henbit		S	C .	С	C	C
Lamium amplexicaule			ļ			
Ryegrass, Italian			S	С	С	С
Lolium multiflorum					•	
Speedwell, corn	S	С	С	С	С	С
Veronica arvensis						
Vetch, common			S	С	С	С
Vicia sativa						
Note: C= Control S = Suppression						
*These rates apply only to sites where	established compe	titive Turf is pre	sent.			

Wasal Consiss			This F	roduct (fl. o	zs./A)		
Weed Species				Oust (oz./A)			
	8 + 0.25	12 + 0.25	12 + 0.5	16 + 0.25	16 + 0.5	12 + 1	16 + 1
Barley, little Hordeum pusilium	С	C	С	С	С	С	С
Bedstraw, catchweed Galium aparine	С	С	С	С	С	С	С
Bluegrass, annual Poa annua	S	С	С	С	С	С	С
Chervil Chaerophyllum tainturieri	С	С	С	С	С	С	С
Chickweed, common Stellaria media	S	С	С	С	С	С	С
Clover, crimson Trifolium incarnatum	S	S	S	S	С	С	С
Clover, large hop Trifolium campestre			S	S	S	С	С
Fescue, tall Festuca arundinacea			•	÷		S	S
Geranium, Carolina Geranium carolinianum		S	S	С	С	С	С
<b>Henbit</b> Lamium amplexicaule		S	С	С	С	С	С
Ryegrass, Italian Lolium multiflorum		S	S	С	С	С	С
Speedwell, corn Veronica arvensis	S	С	С	С	С	С	Ć
Vetch, common Vicia sativa	С	С	C	С	С	С	С

## **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 Oust label and suppression or partial control of certain perennial weeds.

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

For best results, see the "WEEDS CONTROLLED" section of this label for proper stage of growth.

Bahiagrass	Johnsongrass*
Paspalum notatum	Sorghum halepense
Bluestem, silver	Trumpetcreeper**
Andropogon saccharoides	Campsis radicans
Fescue, tall	Vaseygrass
Festuca arundinacea	Paspalum urvillei
* Control at higher rates.	
** Suppression at higher rates only.	

This product may be tank mixed with Oust. If tank mixed, use no more than 1 to 2 pints per acre of this product with 1 to 2 ounces of Oust per acre. Use the lower rates of both mixtures to control annual weeds below 6 inches in height (or runner length in annual vines) that are listed in the "WEEDS CONTROLLED" section of this booklet and the Oust label. Use the higher rates as annual weeds increase in size and approach the flower and 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 Paspalum notatum Bluestem, silver Andropogon saccharoides Broomsedge Andropogon virginicus Dock, curly Rumex crispus Dogfennel Eupatorium capillifolium	Johnsongrass* Sorghum halepense Poorjoe** Diodia teres Trumpetcreeper* Campsis radicans Vaseygrass Paspalum urvillei Vervain, blue Verbena hastata
•	· · · · · · · · · · · · · · · · · · ·
Festuca arundinacea  * Control at higher rates.	
** Suppression at higher rates only.	

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

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

#### **COOL SEASON TURF GROWTH REGULATION**

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

This product is can be used for management of coarse Turf on roadside rights-of-way or other industrial areas. Do not use on high-quality Turf or other areas where 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 will wear off.

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

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

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

Toll forgous	Cmooth bromo
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 in 10 to 40 gallons of spray solution per acre. Apply when annual grasses are actively growing and before the seedheads are in the boot stage of development.

Treatments made after seedhead emergence may cause injury to the desired grasses.

#### **Tank Mixtures**

This product may be tank mixed with the products listed, provided the product tank mixed is registered for use on the listed site. 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 of active ingredient 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**

This product plus Telar®: 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 0.5 ounce of Telar 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 growth season.

**This product plus Oust:** For suppression of Tall fescue growth and seedheads and control or partial control of some annual weeds, apply this tank mixture after greenup and prior to boot-to-seedhead stage of development. Use up to 0.25 ounce of Oust per acre.

This product plus Escort<sup>®</sup>: This tank mixture can be applied after mowing or removal of Tall fescue seedheads for Turf growth suppression and control of some annual weeds. Use up to 0.33 ounce of Escort per acre

NOTE: THIS PRODUCT IS NOT REGISTERED FOR USE WITH ESCORT IN CA.

#### **Smooth Brome**

This product plus Oust: For suppression of Smooth brome growth and seedheads and control of partial control of some annual weeds, apply this tank mixture after greenup or prior to boot-to-seedhead stage of development. Use up to 0.25 ounce of Oust per acre.

## BAHIAGRASS SEEDHEAD AND VEGETATIVE SUPPRESSION

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

Apply this product 1 to 2 weeks after full greenup of Bahiagrass or after Bahiagrass has been mowed to a uniform height of 3 to 4 inches. Application must be made prior to seedhead emergence. Apply 6 fluid ounces per acre of this product plus 0.5 to 1% of nonionic surfactant by total spray volume in 10 to 40 gallons of water per acre.

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

A tank mixture of this product plus Oust **may be applied only on roadsides** for seedhead inhibition and vegetative suppression. Apply 6 fluid ounces per acre of this product plus 0.25 ounce per acre of Oust, plus 0.5 to 1% nonionic surfactant by total spray volume 1 to 2 weeks following an initial Spring mowing.

When using this product plus Oust for suppression of Bahiagrass, make only 1 application per year.

#### **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.

See "USE INFORMATION" and "MIXING, ADDITIVES AND APPLICATION INSTRUCTIONS" 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 the crop section of this label, the combined total of all treatments must not exceed 8 quarts per acre of this product per year.

Do not plant subsequent crops other than those on the label for 30 days following application.

Do no 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 harvest forage grasses and legumes.

	Row Crops	
Corn (all)*	Peanuts	Soybeans*
Cotton*	Sorghum (milo)*	Sugarcane*
	Cereal Grains	
Barley*	Oats*	Triticale*
Buckwheat*	Rice**	Wheat (all)*
Millet (pearl, proso)*	Rye*	Wild rice*
YE	Citrus	
Calamondin	Lemon	Pummelo
Chironia	Lime	Tangelo
Citron 2	Mandarin orange	Tangerine
Grapefruit	Orange (all)	Tangors
Kumquat		
	Tree Nuts	
Almond	Chestnut	Macadamia
Beechnut	Chinquapin	Pecan
Brazil nut	Filbert (hazelnut)	Pistachio
Butternut	Hickory nut	Walnut (black, English)
Cashew	·	
	Vine Crops	
Grapes	Kiwi fruit	
	Tree Fruits	
Apple	Mayhaw	Pear
Apricot	Nectarine	Plum/Prune (all)
Cherry (sweet, sour)	Olive	Quince
Loquat	Peach	
A M. I.	Vegetables	D
Artichoke, Jerusalem	Eggplant***	Parsley
Asparagus*	Endive	Parsnip
Beans (all)	Garlic***	Peas (all)
Beet greens	Gourds***	Pepper (all)***
Beets (red, sugar)	Groundcherry***	Persian Melon***
Broccoli (all)	Honeydew melon***	Potato (Irish, Sweet)
Brussels sprouts	Honey ball melon***	Pumpkin***
Cabbage (all)	Horseradish	Radish
Cabbage, Chinese	Kale	Rape greens, rapini
Cantaloupe***	Kohlrabi	Rhubarb
Carrot	Leek	Rutabaga
Cauliflower	Lentils	Spinach (all)
Casaba melon***	Lettuce	Squash
Celery	Mango melon***	(Summer, Winter)***
Chard, Swiss	Melons (all)***	Tomatillo***
Chicory	Muskmelon***	Tomato***†
Collards	Mustard greens	Turnip
Crenshaw melon***	Okra	Watercress***
	1 ~ .	1
Cucumber***	Onion	Watermelon*** Yams

Small Fruits and Berries			
Blackberry	Currant	Huckleberry	
Blueberry	Dewberry	Loganberry	
Boysenberry	Elderberry	Olallieberry	
Cranberry	Gooseberry	Raspberry (black, red)	
	Forage Crops and Legu	ımes	
Alfalfa*	Forage grasses*	Forage legumes*	
	Tropical Crops		
Acerola	Figs	Pineapple****	
Atemoya	Genip	Pomegranate	
Avocado	Guava	Sapodilla	
Banana (Plantains)	Jaboticaba	Sapote	
Breadfruit	Jackfruit	(black, mamey, white)	
Canistel	Longan	Soursop	
Carambola	Lychee	Sugarapple	
Cherimoya	Mango	Tamarind	
Cocoa beans	Papaya	Tea	
Coffee	Passion fruit		
Dates	Persimmons		

\* 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 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 handheld equipment, see "MIXING, ADDITIVES AND APPLICATION INSTRUCTIONS" and "WEEDS CONTROLLED" sections of this label.

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

**Selective equipment** — This product may be applied through recirculating sprayers, shielded applicator 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 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.

## Preharvest Interval (PHI):

Crops	PHI (days)
Cotton, Soybeans	7
Citrus: Calamondin, Chironja, Citron, Grapefruit, Kumquat, Lemon, Lime, Mandarin orange, Orange, Pummelo, Tangelo, Tangerine Tangors	1
Nut Crops: Almond, Beechnut, Brazil nut, Butternut, Cashew, Chestnuts, Chinquapin, Filbert, Hazelut, Hickory nut, Macadamia, Pecan, Pistachio, Walnut	3
Pome Fruits: Apples, Loquat, Mayhaw, Pear, Quince	. 1
Stone Fruits: Apricots, Cherries, Nectarines, Olives, Peaches, Plums/Prunes	17
Sorghum (Milo)*	40
Tropical Fruits: Acerola, Atemoya, Avocado, Breadfruit, Canistel, Carambola, Cherimoya, Cocoa beans, Dates, Figs, Genip, Jaboticaba, Jackfruit, Longan, Lychee, Mango, Mayhaw, Passion Fruit, Persimmon, Pomegranate, Sapodilla, Sapote, Soursop, Sugar apple, Tamarind, Tea	14
Tropical Fruits: Banana, Guava, Papaya, Plantains	1
Tropical Fruit: Coffee	28
*Do not use roller applicators. Do not feed or graze Milo fodder. Do not ensile treate	ed vegetation.

#### **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 the 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% 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. Apply delayed treatments as directed 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 suitable types of spray equipment for postemergence, postharvest applications. A directed spray is any application where the spray pattern is aligned in such a way as to avoid direct contact of the spray with the crop. A shielded spray is any application where a physical barrier is positioned and maintained between the spray and the crop to prevent contact of spray with the crop.

## **BERRIES AND SMALL FRUITS**

For Cranberries, apply after fruit set and no later than 30 days before harvest.

For other Berries, apply as a preplant broadcast application or as a directed spray or wiper application, postplanting.

See "USE 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.

For small Fruits and Berries, allow a minimum of 14 days between last application and harvest.

For wick or other wiper applicators — Mix 1 gallon of this product in 4 gallons of water to prepare a 20% solution. Apply the solution to emerged weeds. Apply after Cranberry fruit set and no later than 30 days before harvest. In severe infestations, reduce equipment ground speed to ensure that treatment in the opposite direction may be beneficial.

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

#### **FALLOW AND REDUCED-TILLAGE SYSTEMS**

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

**Tank Mixtures of This Product:** 

plus Banvel plus nonionic surfactant plus 2,4-D plus nonionic surfactant plus Goal™ plus nonionic surfactant

DO NOT APPLY BANVEL OR 2.4-D TANK MIXTURES BY AIR IN CA.

This product may be tank mixed with the products listed, provided the product tank mixed is registered for use on the listed site.

Applications of 2,4-D or Banvel must be made at least 7 days prior to planting Corn. The addition of Banvel in a mixture with this product may provide short-term residual control of selected weed species. Some crop injury may occur if Banvel is applied within 45 days of planting. Refer to the Banvel and 2,4-D labels for cropping restrictions and other use instructions.

# This Product plus Goal Tank Mixtures

This product alone or in tank mixtures with Goal plus 0.5 to 1% nonionic surfactant by total spray volume will provide control of the weeds listed below.

Apply when weeds are actively growing and at the stated 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.

This Product – 12 fl. ozs. per acre	
Wheat	18 inches*
Barley	12 inches
Barnyardgrass, Bluegrass (Annual), Rye	6 inches
This Product – 16 fl. ozs. per acre	
Annual Grasses (above) plus:	
Chickweed, Groundsel, Marestail, Rocket (London), Ryegrass (Annual), Shepherdspurse	6 inches
Crabgrass, Johnsongrass (Seedling), Lambsquarters, Oats (Wild), Pigweed (Redroot), Mustards	12 inches
Note: Use 32 fl. ozs. of this product per acre where heavy weed densities exist.  * Maximum height or length in inches.	

This Product – 12 fl. ozs. per acre + Goal** -	- 2 to 4 fl. ozs. per acre		
Annual Grasses (above) plus:			
Cheeseweed (Common), Chickweed, Groundsel	3 inches		
Rocket (London), Shepherdspurse	6 inches		
This Product – 16 fl. ozs. per acre + Goal** -	- 2 to 4 fl. ozs. per acre		
Annual Weeds (above) p	lus:		
Cheeseweed (Common), Groundsel	6 inches		
Chickweed, Rocket (London), Shepherdspurse	12 inches		
Note: Use 32 fl. ozs. of this product per acre in mixtures with 2 to 4 fl. ozs. of Goal	per acre where heavy weed densities exist.		
** Use the higher rate of Goal when weeds approach maximum height or stands are	e dense.		

These 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 DIRECTIONS MADE IN THIS SECTION ARE NOT REGISTERED FOR USE IN CA.

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:

This Product at 16 to 20 fluid ounces per acre plus 2,4-D at 0.375 to 0.5 pound active ingredient per acre plus Atrazine at 0.75 to 1 pound active ingredient per acre plus Lasso® at 2.5 to 3 quarts per acre

Apply the preceding tank mixture 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.

Weeds Controlled — The following weeds, up to a maximum height of 4 inches, will be controlled:

Brome, downy	Lettuce, prickly
Bromus tectorum	Lactuca serriola
Cheat	Pigweed, redroot
Bromus secalinus	Amaranthus retroflexus
Foxtail, green	Thistle, Russian
Setaria viridis	Salsola kali
Foxtail, yellow	Wheat, volunteer
Setaria lutescens	Triticum aestivum
Kochia*	
Kochia	
* For improved control of Kochia, add 4 fl. ozs	per acre (0.125 pound active ingredient per acre) of Banvel to the above tank mixture.

Risk of crop injury from 2,4-D or Banvel can be reduced by applying this treatment 7 to 14 days before planting.

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.

# Aid to Tillage

This product, when used in conjunction with preplant tillage practices, will provide control of Downy brome, Cheat, Foxtail, Tansy mustard and Volunteer wheat. Apply 8 fluid ounces of this product plus 0.5 to 1% 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 reduce performance.

#### **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, this product controls annual and perennial weeds listed in this label which are growing in pastures, forage grasses and forage legumes composed of Alfalfa, Bahiagrass, Bermudagrass, Bluegrass, Brome, Clover, Fescue, Orchardgrass, Ryegrass, Timothy and Wheatgrass.

**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. Treat no more than one-tenth of any acre 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 to be planted to Sugarcane. 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 equipment** — Apply this product in 10 to 40 gallons of water per acre on emerged weeds growing in fields to be planted to Sugarcane.

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 ratoon 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 handheld equipment see "MIXING, ADDITIVES AND APPLICATION INSTRUCTIONS" and "WEEDS CONTROLLED" sections of this label.

For control of volunteer or diseased Sugarcane, make a 1% 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

This product may be tank mixed with the products listed provided the product tank mixed is registered for use on the listed site.

THE DIRECTIONS MADE IN THIS SECTION ARE NOT REGISTERED FOR USE IN CA.

When applied under the conditions described, these 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 label for crop rotation restrictions and cautionary statement 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 0.5 to 1% by volume of spray solution. The addition of 1 to 2% 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.

#### Corn

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

Atrazine	Dual <sup>™</sup>	Partner <sup>®</sup>
Bicep <sup>®</sup>	Lariat <sup>®</sup>	$Prowl^{@}$
Bullet <sup>®</sup>	Lasso/Alachlor	Simazine
Cyanazine	Micro-Tech <sup>®</sup>	

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 "WEEDS CONTROLLED" section for specific rate information.

# Soybeans

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

Canopy®	Linuron	Pursuit <sup>®</sup>
Command <sup>®</sup>	Lorox® Plus	Pursuit Plus
Dual	Micro-Tech	Scepter®
Gemini <sup>™</sup>	Partner	Sencor <sup>®</sup>
Lasso/Alachlor	Preview <sup>™</sup>	Squadron <sup>®</sup>
Lexone™	Prowl	Turbo <sup>™</sup>

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

## **CORN AND SOYBEANS**

Annual weeds — For difficult-to-control weeds such as Barnyardgrass, broadleaf Signalgrass, Crabgrass, Fall panicum and Shattercane 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 grasses 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 in the late Summer or Fall and then follow with a label-approved seedling weed control program at-planting.

DO NOT USE THESE TANK MIXTURES FOR BERMUDAGRASS OR JOHNSONGRASS CONTROL IN MINIMUM-TILLAGE SYSTEMS.

For Bermudagrass control, follow the instructions under the "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 the "PERENNIAL WEEDS" section of this label, and then use a label approved seedling weed control program with conventional tillage.

#### **PREHARVEST APPLICATIONS**

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 and Soybeans.

## Soybeans

Apply after all pods have set and lost all green color. Allow a minimum of 7 days between application and harvest of Soybeans. Take care to avoid excessive seed shatter loss due to ground application equipment.

Do not graze or harvest treated crop for livestock feed within 25 days of last preharvest application.

DO NOT APPLY MORE THAN 6 QUARTS PER ACRE OF THIS PRODUCT FOR PREHARVEST APPLICATIONS.

DO NOT APPLY MORE THAN 1 QUART OF THIS PRODUCT BY AIR.

For specific rates and applications 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.

See the "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label for ground and aerial application instructions.

Note: Do not apply to Soybeans grown for seed because a reduction in germination or vigor may occur.

THE USE OF THIS PRODUCT FOR PREHARVEST SOYBEANS IS NOT REGISTERED IN CA.

#### 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.

FOR AERIAL APPLICATIONS, REFER TO THE "APPLICATION EQUIPMENT AND TECHNIQUES" AND "AERIAL EQUIPMENT" SECTIONS OF THIS LABEL. DO NOT EXCEED A MAXIMUM RATE OF 1 QUART PER ACRE OF THIS PRODUCT WHEN MAKING APPLICATIONS BY AIR.

**Weed control** — For specific rates of application and instructions for control of various annual and perennial weeds for this product used alone or in the following tank mixtures, see the "WEEDS CONTROLLED" section of this label.

To control Johnsongrass using multiple-directed or broadcast over-the -top spray equipment, apply 1 quart of this product plus 0.5 to 1% nonionic surfactant by total spray volume in 10 to 20 gallons of water per acre. Ensure complete coverage.

For partial control of Field bindweed, apply 1 quart of this product plus 0.5 to 1% nonionic surfactant by total spray volume in 3 to 20 gallons of water per acre. Apply when Bindweed is actively growing and 12 inches or greater in length. Reduced performance may result if Bindweed is under drought stress.

**Tank mixtures** — This product may be tank mixed with the products listed, provided the product tank mixed is registered for use on the listed site. When applied under the conditions described, these tank mixtures control annual and perennial weeds listed on this label prior to the harvest of Cotton:

## This product:

plus DEF<sup>®</sup> 6
plus Folex<sup>®</sup>
plus Prep<sup>™</sup>
plus Prep plus DEF 6 or Folex

For application guidelines, precautions and use rates, refer to DEF, Folex and Prep labels. This product when tank mixed with DEF 6 or Folex defoliants, may provide enhancement of Cotton leaf drop and regrowth

inhibition.

**Timing of application** — Apply this product or these tank mixtures for preharvest weed control after 60% of the Cotton bolls have opened.

**Note:** Do not apply to crops grown for seed. Allow a minimum of 7 days between application and harvest. Do not feed or graze treated Cotton forage or hay following preharvest application.

#### TREE AND VINE CROPS

This product can 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, handheld 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 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. EXTREME CARE MUST BE EXERCISED TO AVOID CONTACT OF HERBICIDE SOLUTION, SPRAY, DRIFT OR MIST WITH FOLIAGE OR GREEN BARK OF TRUNK, BRANCHES, SUCKERS, FRUIT OR OTHER PARTS OF TREES OR VINES. CONTACT OF THIS PRODUCT WITH OTHER THAN MATURED BROWN BARK CAN RESULT IN SERIOUS CROP DAMAGE. AVOID PAINTING CUT STUMPS WITH THIS PRODUCT AS INJURY RESULTING FROM 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 the specific directions that follow.

## Middles Management

For annual weeds in middles between rows of tree and vine crops. For Citrus crops, treat uniformly between trees.

## This Product Alone and This Product 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 0.5 to 1% nonionic surfactant by total 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.

	Maximum	Rate Per Acre		
Weed Species	Height/Diameter (inches)	This Product (fl. ozs.) + Goal (fl. ozs.)		
Barley, foxtail				
Hordeum vulgare	6	8 -		
Bluegrass, annual Poa annua				
Barnyardgrass				
Echinochloa crus-galli		12 -		
Chickweed, common		12 -		
Stellaria media				
Red maids				
Calandrinia ciliate				
Crabgrass				
Digitaria spp.		- 16		
Fleabane, hairy				
Conyza bonariensis		or		
Groundsel, common		C,		
Senecio vulgaris		16 to 32 + 4 to 16**		
Junglerice		10 10 32 + 4 10 10		
Echinochloa colona				
Lambsquarters, common				
Chenopodium album				

Pigweed, redroot				
Amaranthus retroflexus	6	16		·-
Rocket, London	i			
Sisymbrium írio			or	
Ryegrass, common			Ψ.	
Lolium multiflora	·	16 to 32	+	4 to 16**
Shepherdspurse		10 10 32	т.	4 10 10
Capsella bursa-pastoris				
Sowthistle, annual	<u> </u>			
Sonchus oleraceus				
Cheeseweed, common	3	12 to 32	+	4 to 16
Malva spp.				
Cheeseweed, common	6	16 to 32	+	4 to 16**
Malva spp.	İ			
Filaree*				•
Erodium spp.				
Horseweed/Marestail				
Conyza canadensis	1.			
Nettle, stinging				
Urtica dioica				
Purselane, common*				
Portulaca oleracea				

#### **Strips**

For annual and perennial weeds in strips of tree and vine crops.

Tank mixtures with residual herbicides — This product may be tank mixed with the products listed, provided the product tank mixed is registered for use on the listed site. 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.

# **This Product:**

```
plus Goal 1.6E
plus Karmex® DF
plus Krovar I
plus Krovar II
plus Simazine
plus Simazine 4L
plus Simazine 80W
plus Solicam™ 80DF
plus Surflan AS
plus Surflan 75W
plus Simazine (4L or 90) plus Surflan (AS or 75W)
plus Goal (1.6E) plus Surflan (AS or 75W)
plus Goal (1.6E) plus Simazine (4L or 90)
plus Goal (1.6E) plus Surflan (AS or 75W)
plus Goal (1.6E) plus Surflan (AS or 75W)
plus Goal (1.6E) plus Surflan (AS or 75W)
plus Simazine (4L or 90)
```

Do not apply these tank mixtures in Puerto Rico.

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

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

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 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.

## This Product 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 0.5 to 1% nonionic surfactant by total spray volume to the spray solution.

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

Hordeum leporinum

Bluegrass, annual

Poa annua

Cheeseweed, common

Malva spp.

Chickweed, common

Stellaria media

Filaree\*

Erodium spp.

Fleabane, hairy

Conyza bonariensis

Groundsel,common Senecio vulgaris Horseweed, marestail
Conyza canadensis
Nettle, stinging
Urtica diocia
Pineappleweed
Matricaria matricariodes
Rocket, London
Sisymbrium irio
Shepherdspurse
Capsella bursa-pastoris
Sowthistle, annual
Sonchus oleraceus

**Note:** The above does not preclude the use of Goal in these mixtures at higher labeled rates for preemergence weed control.

#### Perennial grass Suppression — Orchard Floors

\* Use a minimum of 1.5 qts. of this product in this mixture.

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

**Bahiagrass:** 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 greenup 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 0.5 to 1% 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 suppression 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 0.5 to 1% 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 0.5 to 1% nonionic surfactant by total spray volume in 3 to 20 gallons of water per acre no sooner than 1 to 2 weeks after full greenup. Mowing prior to application may occur provided a minimum height of 3 inches is

maintained. Use the rates of 6 to 10 fluid ounces of this product plus nonionic surfactant 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 0.5 to 1% 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 greenup. Mowing prior to application may occur provided a minimum height of 3 inches is maintained. Sequential application 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 0.5 to 1% 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% 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 0.5 to 1% 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 (FL and TX)

For burndown or control of the weeds listed, apply the specified rates of this product plus 0.5 to 1% 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 0.5 to 1% 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 Diuron 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 Diuron labels.

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

Weed Species	This Product (Rate per Acre)			
	1 qt.	2 qts.	3 qts.	5 qts.
Bermudagrass	В	-	PC	Ċ
Guineagrass				
TX and FL ridge	В	C	c	С
FL flatwoods	-	В	C	С
Paragrass	В	С	С	С
Torpedograss	S	-	PC	С
B = Burndown	C = Control	PC = Partial Control	S = Suppression	

#### 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, Hazelnut, Hickory nut, Macadamia, Pecan, Pistachio, Walnut

Pome Fruits: Apple, Loquat, Mayhaw, Pear, Quince

Stone Fruits: Apricots, Cherries, Nectarines, Olives, Peaches, Plums/Prunes

Tropical Fruits: Acerola, Atemoya, Avocado, Banana (Plantains), Breadfruit, Canistel, Carambola, Cherimoya, Cocoa beans, Coffee, Dates, Figs, Genip, Guava, Jaboticaba, Jackfruit, Longan, Lychee, Mango, Mayhaw, Papaya, Passion fruit, Persimmons, Plantains, Pomegranate, Sapodilla, Sapote, Soursop, Sugar apple, Tamarind, Tea.

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

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 AZ, CA, CO, ID, KS, KY, NJ, ND, OK, OR, TX, UT and WA, except for Peaches grown in states specified in the following paragraph. In all other states use wiper equipment only. For Peaches grown in AL, AR, FL, GA, LA, MS, NC, SC and TN only, apply with a shielded boom sprayer or shielded wiper applicator, which prevents any contact of this product with the foliage or bark of trees. Apply no later than 90 days after first bloom. Applications made after this time may result in severe damage. Remove suckers and low-hanging limbs at least 10 days prior to application. Avoid applications near trees with recent pruning wounds or other mechanical injury. Apply only near trees that have been planted in the orchard for 2 or more years.

EXTREME CARE MUST BE TAKEN TO ENSURE NO PART OF THE PEACH TREE IS CONTACTED.

# **VINE CROPS\***

#### Kiwi

**Grapes:** Any variety of Table, Wine or Raisin grapes may be treated with any equipment listed in this section. Do not apply this product when green shoots, canes or foliage are in the spray zone:

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

\*Refer to the "PREHARVEST INTERVAL (PHI)" section of this label for intervals between application and harvest of tree and vine crops.

# **ROUNDUP READY® CROPS**

DREXEL CHEMICAL COMPANY SPECIFY THE USE OF THIS PRODUCT FOR POSTEMERGENCE APPLICATION ONLY ON CROP VARIETIES DESIGNATED AS CONTAINING THE ROUNDUP READY GENE.

The following instructions include all applications which can be made onto Roundup Ready crops during the complete cropping season.

DO NOT combine these instructions with other use directions made for crop varieties which do not contain the Roundup Ready gene, in the "CROPPING SYSTEMS" section of this label.

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

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 preplant burndown treatment of this product can be used to control existing weeds prior to crop emergence. Some weeds, such as Black nightshade, broadleaf Signalgrass, Sicklepod, Texas panicum, Sandbur, annual Morningglory, Woolly cupgrass, Shattercane, Wild proso millet, Burcucumber, and Giant ragweed with multiple germination times or suppressed (stunted) weeds may require a second application of this product for complete control. Make the second application after some regrowth has occurred and at least 10 days after a previous application of this product.

## ALFALFA WITH THE ROUNDUP READY GENE

# Weed Control Applications in Seed Production of Alfalfa with the Roundup Ready Gene

APPLICATION INSTRUCTIONS: This product will control many troublesome emerged weeds with over-the-top applications in Roundup Ready Alfalfa grown for seed. In-crop applications may be made from emergence through the late vegetative stage and spot treatments may be made from early bud stage through seed harvest.

# **Ground Applications**

For ground applications with broadcast equipment, apply this product in 3 to 40 gallons of spray solution per acre. Carefully select proper nozzle and spray pressure to avoid spraying a fine mist. For best results with ground application equipment, use flat fan nozzles. Check for even distribution of spray droplets.

# **Aerial Applications**

For aerial application, use the specified rates of this product in 3 to 15 gallons of spray solution per acre. DO NOT EXCEED 2 QUARTS OF THIS PRODUCT PER ACRE WHEN MAKING APPLICATIONS BY AIR. FOR AERIAL APPLICATION IN CALIFORNIA, REFER TO THE BACK OF THIS LABEL FOR AERIAL APPLICATION IN THAT STATE. AVOID DRIFT. EXTREME CARE MUST BE USED WHEN APPLYING THIS PRODUCT TO PREVENT INJURY TO DESIRABLE PLANTS AND CROPS WHICH DO NOT CONTAIN THE ROUNDUP READY GENE.

Do not apply during low-level inversion conditions, when winds are gusty or under any other conditions that favor drift. Drift may cause damage to any vegetation contacted to which treatment is not intended. To prevent injury to adjacent desirable vegetation, appropriate buffer zones must be maintained.

See the "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label for procedures to avoid spray drift that may cause injury to any vegetation not intended for treatment.

#### **Sprayer Preparation**

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

TYPES OF APPLICATIONS: Preplant, At-planting, Preemergence, Postemergence and Postharvest of seed.

Maximum Allowable Combined Application Rates (qts./A)		
Combined total per year for all applications	8	
Total of Preplant, At-planting and Preemergence applications	2	
Total in-crop application rate from emergence through the late vegetative stage	6	
Spot-treatment during early bud stage through seed harvest (See the "Spot Treatment After Late Vegetative Stage" section and the "PRECAUTIONS AND RESTRICTIONS" section of this label for complete instructions)	Apply spray-to-wet; do not apply to the point of runoff	

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

Over-the-top Applications

Broadcast applications of this product may be made using ground or aerial equipment in-crop on Roundup Ready Alfalfa from emergence through the late vegetative stage. Do not make broadcast applications of this product between the initiation of Alfalfa budding and the harvest of seed. Any single over-the-top broadcast application of this product must not exceed 2 quarts per acre. Make sequential applications of this product at least 7 days apart.

Due to the biology and breeding constraints of Alfalfa, up to 10% of the seedlings may not contain the Roundup Ready gene and will not survive or thrive after the first application of this product. To limit undesirable effects of stand gaps created by the loss of plants not containing the Roundup Ready gene, make a single application of at least 1 quart of this product per acre at or before the 3 to 4 trifoliate growth stage.

# Spot Treatment After Late Vegetative Stage

For late emerging weeds, this product may be applied as a spot treatment in Roundup Ready Alfalfa grown for seed, during the early bud stage through seed harvest. Applications made during this stage may result in reduced seed yield and quality and are the responsibility of the grower. Make applications on a spray-to-wet basis. Do not spray to the point of runoff. If a spot treatment is made after the late vegetative stage, harvested seed must not be used for Alfalfa sprout production.

## **Postharvest Applications**

Following harvest of Roundup Ready Alfalfa seed, the stand may be managed for forage and hay production. Refer to the below section on "WEED CONTROL APPLICATIONS IN FORAGE AND HAY PRODUCTION OF ALFALFA WITH THE ROUNDUP READY GENE".

#### **Weeds Controlled**

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

Some weeds with multiple germination times or suppressed (stunted) weeds may require a second application of this product for complete control. Make the second application after some regrowth of weeds has occurred. In addition to those weeds listed in this label, this product will suppress or control the parasitic weed, Dodder (Cuscuta spp.) in Roundup Ready Alfalfa seed production. Repeat applications may be necessary for complete control.

Do not make over-the-top applications of this product when in tank mixture with other herbicides, insecticides, or fungicides as this may result in crop injury or reduced weed control.

For applications made prior to the 4-trifoliate growth stage during stand establishment, the use of ammonium sulfate may result in crop injury. Refer to the "ADDITIVES" section of this label for use instructions for ammonium sulfate.

#### USE PRECAUTIONS

If a spot treatment of this product is made after the late vegetative stage, do not use harvested Roundup Ready Alfalfa seed for Alfalfa sprout production. Regardless of applications made, the use of harvested Roundup Ready Alfalfa seed is not suitable for production of Alfalfa sprouts.

USE RESTRICTIONS: Do not make over-the-top broadcast applications of this product between the initiation of Alfalfa budding and the harvest of Roundup Ready Alfalfa seed.

Weed Control Applications in Forage and Hay Production of Alfalfa with the Roundup Ready Gene APPLICATION INSTRUCTIONS: This product will control many troublesome emerged weeds with over-the-top applications in Roundup Ready Alfalfa. Allow at least 5 days between the last application and grazing, or, cutting and feeding of Alfalfa forage and hay.

# **Ground Applications**

For ground applications with broadcast equipment, apply this product in 3 to 40 gallons of spray solution per acre. Carefully select proper nozzle and spray pressure to avoid spraying a fine mist. For best results with ground application equipment, use flat fan nozzles. Check for even distribution of spray droplets.

# **Aerial Applications**

For aerial application, use the specified rates of this product in 3 to 15 gallons of spray solution per acre. DO NOT EXCEED 2 QUARTS OF THIS PRODUCT PER ACRE WHEN MAKING APPLICATIONS BY AIR. FOR AERIAL APPLICATION IN CALIFORNIA,

REFER TO THE BACK OF THIS LABEL FOR AERIAL APPLICATION IN THAT STATE. AVOID DRIFT. EXTREME CARE MUST BE USED WHEN APPLYING THIS PRODUCT TO PREVENT INJURY TO DESIRABLE PLANTS AND CROPS WHICH DO NOT CONTAIN THE ROUNDUP READY GENE.

Do not apply during low-level inversion conditions, when winds are gusty or under any other conditions that favor drift. Drift may cause damage to any vegetation contacted to which treatment is not intended. To prevent injury to adjacent desirable vegetation, appropriate buffer zones must be maintained.

See the "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label for procedures to avoid spray drift that may cause injury to any vegetation not intended for treatment.

**Sprayer Preparation** 

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

TYPES OF APPLICATIONS: Preplant, At-planting, Preemergence, Postemergence and Postharvest of seed.

Maximum Allowable Combined A (qts./A)	pplication Rates
Combined total per year for all applications including preplant during year of establishment	8
Total of Preplant, At-planting and Preemergence applications	2
Combined total per year in-crop applications for newly established and established stands	6

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

# Over-the-top Applications

Apply this product to Roundup Ready Alfalfa from its emergence until 5 days prior to cutting. Do not exceed 2 quarts of this product per acre for any single over-the-top application. Sequential applications of this product has to be at least 7 days apart.

**Note:** Where Roundup Ready Alfalfa is grown with a companion or cover crop, or is over-seeded with a second species, over-the-top applications of this product will eliminate the non-Roundup Ready species.

During stand establishment, up to 10% of the seedlings may not contain the Roundup Ready gene and will not survive or thrive after the first application of this product due to the biology and breeding constraints of Alfalfa. To remove the undesirable effects of stand gaps created by the loss of plants not containing the Roundup Ready gene, apply a single application of at least 1 quart (32 fluid ounces) of this product per acre at or before the 3 to 4 trifoliate growth stage.

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

# **Weeds Controlled**

For specific rates of application and instructions for control of various annual and perennial weeds, refer to the "ANNUAL WEEDS RATE TABLE" and the "PERENNIAL WEEDS RATE TABLE" of this label. Some weeds with multiple germination times or suppressed (stunted) weeds may require a second application of this product for complete control. Make the second application after some regrowth of weeds has occurred.

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

USE RESTRICTIONS: Do not apply more than 2 quarts of this product by any single over-the-top application. Sequential applications of this product have to be made at a minimum of 7-day intervals. The combined total per year for all in-crop application in newly established and established stands must not exceed 6 quarts per acre.

Before application, remove domestic livestock. Wait for at least 5 days after the last application before grazing, or cutting and feeding of the Roundup Ready Alfalfa forage and hay.

#### CANOLA WITH THE ROUNDUP READY GENE

TYPES OF APPLICATIONS: Preplant, Preemergence, At-Planting, Postemergence.

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

USE INSTRUCTIONS: This product will control many troublesome emerged weeds when applied preplant, preemergent and/or with over-the-top applications in Roundup Ready Canola. Allow a minimum of 60 days between last application and Canola harvest.

Maximum Allowable Combined Application Quanti (qts./A)	ties Per Season
Total of Preplant, At-planting, Preemergence applications '	2
Total in-crop application rate from emergence to 6-leaf stage (Spring varieties) or prior to bolting in the Spring (Winter varieties)	1

# **Ground Applications**

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

# **Aerial Applications**

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

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

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

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

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

## Sprayer Preparation

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

# Preplant, Preemergence, At-Planting

USE INSTRUCTIONS: This product may be applied before, during or after planting Canola by aerial or ground application equipment. The maximum combined application rate from all preplant and preemergent applications must not exceed 2 quarts per acre per season.

**NOTE:** In no-till and stale seedbed systems, always use a burndown treatment to control existing weeds before Canola emerges. Apply a preplant burndown treatment of 0.5 to 1 quart per acre of this product.

## **Roundup Ready Spring Canola 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.

# Postemergence

USE INSTRUCTIONS: This product may be applied by aerial or ground application equipment postemergence to Roundup Ready Spring Canola varieties 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.

#### Weeds Controlled

For specific rates of application and instructions, refer to the "WEEDS CONTROLLED" section of this label.

**Single Application:** Apply 0.5 to 0.75 quart per acre no later than the 6-leaf stage for the control of annual weeds. Avoid overlapping applications that may result in temporary yellowing, delayed flowering, and/or growth reduction. Similar injury may result when applications of more than 11 fluid ounces per acre are applied after the 4-leaf stage.

**Sequential Application:** Apply 0.5 quart 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. Do not make sequential applications for early emerging annual weeds and perennial weeds such as Canada thistle and Quackgrass or when controlling weeds with multiple application times.

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

USE RESTRICTIONS: No more than two over-the-top broadcast applications may be made from crop emergence through the 6-leaf stage of development and the total in-crop application must not exceed 1 quart per acre.

Allow a minimum of 60 days between last application and Canola harvest.

# **Roundup Ready Winter Canola**

Roundup Ready Winter Canola is defined as those Roundup Ready Canola varieties that are seeded in the Fall and harvested the following Spring or Summer. Winter Canola varieties are intended to enter a cold period dormancy in the Winter.

#### Postemergence

USE INSTRUCTIONS: This product may be applied by aerial or ground application equipment postemergence to Roundup Ready Winter Canola varieties from emergence to the 6-leaf stage 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. Allow a minimum of 60 days between last application and harvest.

**Single Application:** Apply 0.5 to 0.75 quart per acre in the Fall and no later than the 6-leaf stage for the control of annual weeds. Avoid overlapping applications which may result in temporary yellowing, delayed flowering, and growth reduction.

**Sequential Applications:** Apply 0.5 quart per acre to 1- to 3-leaf Canola in the Fall, followed by a sequential application at a minimum interval of 10 days, but before bolting in the Spring. Do not make sequential applications for early emerging annual weeds and Winter emerging weeds such as Downey brome, Jointed goatgrass and Ryegrass.

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

USE RESTRICTIONS: No more than two over-the-top broadcast applications may be made from crop emergence up the onset of bolting and the total in-crop application must not exceed 1 quart per acre. Allow a minimum of 60 days between last application and Canola harvest.

# Weeds Controlled

For specific rates of application and instructions for control of various annual and perennial weeds, refer to the "ANNUAL WEEDS" and "PERENNIAL WEEDS RATE TABLE" sections of this label.

Do not make over-the-top application of this product when in tank mixture with other herbicides, insecticides, or fungicides as this may result in reduced weed control or crop injury.

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

#### **CORN WITH THE ROUNDUP READY GENE**

DREXEL CHEMICAL SPECIFY THE USE OF THIS PRODUCT FOR POSTEMERGENCE APPLICATION ONLY ON CORN HYBRIDS WHICH HAVE THE ROUNDUP READY GENE.

Applying this product to Corn hybrids which are not designated 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 certain glyphosate-containing herbicides including this product. Information on Roundup Ready Corn is available from your seed supplier. Crop safety and weed control performance are not warranted when this product is used in conjunction with seed from unauthorized sources.

## **Application Instructions**

This product may be applied postemergence to Roundup Ready Corn from emergence through the V-8 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 V-8 stage or 30 inches, must not exceed 2 quarts per year.

# **Maximum Yearly Amounts Allowed**

The yearly maximum allowable amount of this product that can be applied also includes other glyphosate-containing products, such as Glyfos Herbicide, Glyfos X-TRA<sup>®</sup>, Glyfos AU, Roundup and Roundup Ultra<sup>®</sup>. **Preplant:** Maximum amount of this product which can be applied prior to crop emergence is 5 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 prior to harvest is 1 quart per acre. **Cropping season:** Combined total per year for all applications may not exceed 8 quarts per acre.

Summary To	able of Use Directions of T	his Product on Roundup Re	eady Corn
Applications	Max. Rate of This Product per Application	Maximum Amount Applied	Preharvest Interval When Corn is Harvested for:
	Preplant, Pre	emergence	
Single or Sequential	-	5 qts. per acre	Forage - 50 days Grain - see below
Posteme	rgence, In-crop (emergen	ce to V-8 stage or 30 inches	high.)
Single	1 qt. per acre	1 qt. per acre	Forage - 50 days Grain - see below
Sequential (min. 10-day interval between applications)	1 qt. per acre	2 qts. per acre	Forage - prohibited Grain - see below
F	reharvest, Corn for grain	(Black layer to 7 days PHI)	
Single	1 qt. per acre	1 qt. per acre	Grain - 7 days

When applied as directed, this product controls labeled annual grasses 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. Apply to actively growing weeds before they reach the maximum height listed in the "WEEDS CONTROLLED" section.

Refer to "MIXING, ADDITIVES AND APPLICATION INSTRUCTIONS" section of this label for proper use instructions.

# **Ammonium Sulfate**

Ammonium sulfate may be mixed with this product for application to Roundup Ready Corn. Refer to the "MIXING, ADDITIVES AND APPLICATION INSTRUCTIONS" section of this label for use instructions for ammonium sulfate.

## **Preharvest Intervals**

Allow a minimum of 50 days between application of this product and harvest of Corn forage and 7 days between application and harvest of Corn grain. Allow a minimum of 10 days between in-crop applications of this product. Do not graze, harvest or feed Corn forage or silage following sequential in-crop applications of this product on Roundup Ready Corn. There are no rotational crop restrictions following applications of this product.

ATTENTION: AVOID DRIFT. EXTREME CARE MUST BE EXERCISED 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.

## **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.

## **Aerial Applications**

Use the specified rates of this product in 3 to 15 gallons of spray solution per acre. Do not exceed 1 quart per acre. See "WEEDS CONTROLLED" section of this label for specified rates. AVOID DRIFT. DO NOT APPLY DURING INVERSION CONDITIONS WHICH FAVOR DRIFT. DRIFT MAY CAUSE DAMAGE TO DESIRABLE VEGETATION CONTACTED TO WHICH TREATMENT IS NOT INTENDED. TO PREVENT INJURY TO DESIRABLE VEGETATION, BUFFER ZONES MUST BE MAINTAINED. AERIAL APPLICATIONS TO ROUNDUP UP READY CORN MAY BE MADE ONLY IN THE FOLLOWING STATES: AL, AR, CO, FL, GA, KS, LA, MS, MO (Bootheel only), NE, NC, ND, OK, SC, SD, TN, TX.

#### **Weed Control Directions**

Apply 24 to 32 fluid ounces of this product per acre for control of labeled grasses and broadleaf weeds in conventional and no-till Corn production systems. See "ANNUAL WEEDS" section of this label for rates and directions for specific annual weeds. This product, applied up to 1 quart per acre, will control or suppress the growth of perennial weeds such as:

Bermudagrass	Horsenettle	Redvine
Canada thistle	Nutsedge	Trumpetcreeper
Common milkweed	Quackgrass	Swamp smartweed
Field bindweed	Rhizome Johnsongrass	Wirestem muhly
Hemp dogbane		

For additional information on perennial weeds, see the "PERENNIAL WEEDS" section of this label.

**Preemergence followed by postemergence weed control program:** This product may be applied postemergence in-crop following any labeled preemergence herbicide application. Make post-application of this product 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 this label. This product may be applied postemergence to Roundup Ready Corn from emergence through V-8 (8 leaves with collars) stage or until Corn height reaches 30 inches (free standing), whichever comes first.

Postemergence only weed control program: This product may be applied alone as a postemergence in-crop application to provide control of emerged weeds listed on the label. Make postemergence application of this product 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 listed grasses and broadleaf leaves. This product may be applied postemergence to Roundup Ready Corn from emergence to the V-8 stage or until Corn height reaches 30 inches (free standing), whichever comes first. This product may be applied in tank mixtures with a labeled rate of Harness®, Harness Xtra®, Harness Xtra 5.6L, Me-Too-Lachlor™ II, Micro-Tech®, Bullet®, Partner, Permit® or Atrazine. Refer to the specific product label

and observe all precautions and limitations on the label for all products used in tank mixtures, including application timing restrictions, soil restrictions, minimum recropping 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 following table for height limitation for tank mix partner.

Maximum Height of Corn for Application
5 inches
11 inches
12 inches
24 inches

**Note:** Nonionic surfactants which are labeled for use with postemergence herbicides may be used. When using additional surfactant, use 0.5% surfactant concentration (2 quarts per 100 gallons of spray solution) for those surfactants containing less than 70% active ingredient.

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

#### **Postharvest**

USE INSTRUCTIONS: This product may be applied after harvest of Corn.

Higher rates may be required for control of large weeds that were growing in the crop at the time of harvest. Tank mixtures with 2,4-D or dicamba may be used.

USE RESTRICTIONS: Allow a minimum of 7 days between treatment and harvest or feeding of treated vegetation.

# For Postemergence Applications to Roundup Ready Corn 2

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

# **Application Instructions**

For Roundup Ready Corn 2 from emergence through the V8 stage (8 leaves with collars) or until Corn height reaches 30 inches, whichever comes first, this product may be applied over-the-top broadcast or with drop nozzles. When Corn height is 24 to 30 inches (free standing), use drop nozzles for optimum spray coverage and weed control. For Corn heights 30 to 48 inches (free standing), apply this product only using ground application equipment with drop nozzles adjusted to avoid spraying into the whorls of the Corn plants. Single incrop applications of this product must not exceed 1.5 quarts per acre.

Maximum Allowable Combined Application Quantities Per Season (qts./A)	
Total of Preplant, At-planting, Preemergence applications.	5
Postemergence (in-crop): Maximum combined total of multiple in-crop applications from emergence through the 48 inch stage.	3
Preharvest: Maximum preharvest application rate after maximum kernel fill is complete and the crop is physiologically mature (black layer formation) with 35 percent grain moisture or less until 7 days before harvest.	1
See Precautions and Restrictions on preharvest applications.	
Cropping Season: Combined total per year for all applications.	8

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 tankmixed with Bullet or Micro-Tech 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 are not directed with this product since this may result in increased potential for crop injury.

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 OF CONTAMINATION FROM OTHER HERBICIDES PRIOR TO MIXING AND APPLYING THIS PRODUCT.

# **Ground Applications**

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.

## **Aerial Applications**

For aerial applications, use the specified rates of this product in 3 to 15 gallons of spray solution per acre. Do not exceed 1 quart per acre. See "WEEDS CONTROLLED" section of this label. AVOID DRIFT - DO NOT APPLY DURING INVERSION CONDITIONS, WHEN WINDS ARE GUSTY OR UNDER ANY OTHER CONDITIONS WHICH FAVOR DRIFT. DRIFT MAY CAUSE DAMAGE TO ANY VEGETATION CONTACTED TO WHICH TREATMENT IS NOT INTENDED. TO PREVENT INJURY TO ADJACENT VEGETATION, APPROPRIATE BUFFER ZONES MUST BE MAINTAINED.

#### **Weed Control Directions**

Apply 0.75 to 1 quart of this product per acre for control of labeled grasses and broadleaf weeds in conventional and no-till Corn production systems. Refer to the "ANNUAL WEEDS" section of this label for specified rates for specific annual weeds. This product applied at up to 1.5 quarts 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 "PERENNIAL WEEDS" section of this label.

# Preplant, Preemergence, At-Planting

USE INSTRUCTIONS: This product may be applied alone or in tankmixture before, during or after planting Corn.

TANK MIXTURES: This product may be tank mixed with Bullet, Degree®, Degree Xtra®, Harness, Harness Xtra, Harness Xtra 5.6L, Lariat®, Lasso or Micro-Tech herbicides at 50 to 100 percent of labeled rate. Refer to the specific product label and observe all precautions and limitations on the label for any preemergence herbicide application, including application timing restrictions, soil restrictions, minimum recropping interval and rotational quidelines - the more restrictive requirements apply.

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

# Preemergence followed by Postemergence Weed Control Program

USE INSTRUCTIONS: This product may be applied postemergence in-crop following any labeled preemergence herbicide application. Make postapplication of this product before the weeds reach a height and/or density that the weeds become competitive with the crop.

An in-crop application of this product at the specified rates will provide control of emerged weeds listed on the label. This product may be applied over-the-top broadcast or with drop nozzles postemergence to Roundup Ready Corn 2 from emergence through the V8 stage (8 leaves with collars) or until Corn height reaches 30 inches (free standing), whichever comes first. When Corn height is 24 to 30 inches, use drop nozzles for optimum spray coverage and weed control. For Corn heights 30 to 48 inches (free standing), apply this product only using ground application equipment with drop nozzles and avoid spraying into the whorls of the Corn plants.

## Postemergence Only Weed Control Program

USE INSTRUCTIONS: This product may be applied alone as a postemergence in-crop application to provide control of emerged weeds listed on the label. Make postemergence application of this product 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 0.75 to 1 quart per acre will control the labeled grasses and broadleaf

weeds. This product may be applied over-the-top broadcast or with drop nozzles postemergence to Roundup Ready Corn 2 from emergence through the V8 stage or until Corn height reaches 30 inches (free standing), whichever comes first. When Corn height is 24 to 30 inches, use drop nozzles for optimum spray coverage and weed control. For Corn height 30 to 48 inches (free standing), apply this product only using ground application equipment with drop nozzles and avoid spraying into the whorls of the Corn plants.

TANK MIXTURES: This product may be applied in tank mixtures with a labeled rate of Degree, Degree Xtra, Harness, Harness Xtra, Harness Xtra 5.6L, Me-Too-Lachlor II, Micro-Tech and Bullet herbicides at 50 to 100 percent of labeled rate. This product may be applied in tank mixtures with Permit and Atrazine at labeled rates. Refer to the specific product label and observe all precautions and limitations on the label for all products used in tank mixtures, including application timing restrictions, soil restrictions, minimum recropping intervals and rotational guidelines - the more restrictive requirements apply. Tank 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 (inches)
Degree	
Degree Xtra	
Harness	11
Harness Xtra	
Harness Xtra 5.6L	
Bullet*	5
Micro-Tech*	. 3
Permit	30
Atrazine	12
Me-Too-Lachlor II	40
* Bullet and Micro-Tech are not registered for use as a poster	mergence application in Texas.

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

USE RESTRICTIONS: Single in-crop applications of this product must not exceed 1.5 quarts per acre. 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. For applications at preharvest timing (see Preharvest section of this label), allow a minimum of 7 days between application and harvest or feeding of Corn stover or grain.

# **Preharvest**

USE INSTRUCTIONS: A single preharvest application of up to 1 quart per acre of this product may be made, if no more than a total of 2 quarts of this product has been previously applied in over-the-top or drop nozzle applications. Make a preharvest application at 35 percent grain moisture or less. Ensure that maximum kernel fill is complete and the Corn is physiologically mature (black layer formed).

USE RESTRICTIONS: Do not make a preharvest application of this product if more than a combined total of 2 quarts of this product has been previously applied in over-the-top or drop nozzle applications. Allow a minimum of 7 days between a preharvest application and harvest or feeding of Corn stover or grain.

# **Postharvest**

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

USE RESTRICTIONS: Allow a minimum of 7 days between treatment and harvest or feeding of treated vegetation.

For Control and Management of Glyphosate Resistant Horseweed (Marestail, *Conyza canadensis*) in Roundup Ready Corn Hybrids Only

USE INSTRUCTIONS: For ground applications, use 10 to 20 gallons of water per acre. For aerial applications, use 3 to 15 gallons of water per acre. For tank mix recommendations, read and carefully observe the cautionary statements and all other information appearing on the product labels, supplemental labeling or fact sheets published separately for all herbicides used.

## In-crop

In-crop Roundup Ready Corn, apply a tank mixture of this product (1 quart per acre) plus Clarity<sup>®</sup> (8 to 16 fluid ounces per acre) or 2,4-D (0.5 to 1.0 pound a.i. per acre). Apply between Corn emergence and the 5-leaf stage of growth (approximately 8 inches tall).

# **COTTON WITH THE ROUNDUP READY GENE**

THIS PRODUCT IS TO BE USED ONLY OVER-THE-TOP OF OR DIRECTED ONTO IMPROVED COTTON VARIETIES THAT ARE DESIGNATED AS COTTON WITH THE ROUNDUP READY GENE.

SEVERE INJURY OR DEATH OF COTTON WILL RESULT IF ANY COTTON VARIETIES NOT PROPERLY DESIGNATED AS HAVING THE ROUNDUP READY GENE ARE SPRAYED WITH THIS PRODUCT. AVOID CONTACT OF HERBICIDE WITH FOLIAGE, GREEN STEMS, FRUITS OR CROPS, OR ANY DESIRABLE PLANTS AND TREES OTHER THAN CROPS WITH THE ROUNDUP READY GENE, SINCE SEVERE INJURY OR DESTRUCTION WILL RESULT. ROUNDUP READY COTTON VARIETIES MUST BE PURCHASED FROM AN AUTHORIZED LICENSED SEED SUPPLIER. THE DESIGNATION, "ROUNDUP READY", INDICATES THE COTTON CONTAINS A PATENTED PROPRIETARY TRAIT. COTTON WITH THE ROUNDUP READY GENE MAY ONLY BE USED FOR PLANTING A COMMERCIAL CROP IN A SINGLE SEASON. SEED MAY NOT BE SAVED FOR REPLANTING AND SAVED SEED MAY NOT BE SUPPLIED TO OTHERS FOR REPLANTING. DREXEL CHEMICAL DOES NOT WARRANT THE SAFETY OR PERFORMANCE OF THIS PRODUCT WHEN USED ON "BROWN BAG" OR FARMER-SAVED SEED.

## **Application Instructions**

This product will control many troublesome weeds with over-the-top, postdirected, hooded sprayer or preharvest application in Roundup Ready Cotton.

Maximum Allowable Yearly Rates of This Product* (qts./A)	
Combined total per year for all applications	8
Total of Preplant, Preemergence applications	5
Total in-crop applications from cracking to lay-by	4
Maximum preharvest application rate	2
*The yearly maximum allowable amount of this product glyphosatecontaining products, such as Glyfos Herbicide, Roundup Ultra.	

## **Ground Applications**

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

# **Aerial Applications**

Apply this product in 3 to 15 gallons of spray solution per acre.

DO NOT EXCEED A MAXIMUM RATE OF 1 QUART PER ACRE OF THIS PRODUCT WHEN MAKING APPLICATIONS BY AIR. AVOID DRIFT. EXTREME CARE MUST BE USED WHEN APPLYING THIS PRODUCT TO PREVENT INJURY TO DESIRABLE PLANTS AND CROPS WHICH DO NOT CONTAIN THE ROUNDUP READY GENE. Do not apply during low-level inversion conditions, when winds are gusty or under any other conditions which favor drift. Drift may cause damage to any vegetation contacted to which treatment is not intended. To prevent injury to adjacent desirable vegetation, appropriate buffer zones must be maintained.



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

# **Spray Equipment Preparation**

It is important that sprayer and mixing equipment be clean and free of pesticide residue before making application of this product to Roundup Ready Cotton. Follow the cleaning procedures specified on the label of the product(s) previously used. Cotton is very sensitive to many herbicides at extremely low concentrations. Thoroughly clean all equipment prior to use of this product. In addition to uses listed, the following applications can be made:

Over-the-top applications: This product may be applied by aerial or ground application equipment postemergence to Roundup Ready Cotton from the ground cracking stage until the 4-leaf (node) stage of development (until the 5th true-leaf reaches the size of a quarter). Over-the-top applications made after the 4-leaf (node) stage of development may result in boll loss, delayed maturity and/or yield loss. Any single over-the-top broadcast application must not exceed 1 quart per acre. No more than 2 over-the-top broadcast applications may be made from crop emergence through the 4-leaf (node) stage of development. Sequential over-the-top applications of this product must be at least 10 days apart and Cotton must have at least 2 nodes of incremental growth between applications.

**Note:** Always plant into a weedfree seedbed. In no-till and stale seedbed systems always burn down existing weeds before Cotton emerges. Apply a preplant burndown treatment of 16 to 48 fluid ounces per acre of this product.

Postdirected or hooded applications: This product may be applied using precision postdirected or hooded sprayers to Roundup Ready Cotton through layby. At this stage, use postdirected equipment which directs the spray to the base of the Cotton plants. Avoid spray contact with Cotton leaves to the maximum extent possible. To minimize spray onto the leaves of the Cotton plants, place nozzles in a low position directing a horizontal spray pattern under the Cotton leaves to contact the weeds in the row, and maintain low spray pressure (less than 30 psi). For best results make applications while weeds are small (less than 3 inches). Applications that contact the Cotton leaves may result in boll loss, delayed maturity and/or yield loss. Any single postdirected application must not exceed 1 quart per acre of this product. Do not make more than two applications from the 5-leaf stage through lay-by. Sequential in-crop applications of this product must be at least 10 days apart and Cotton must have at least two nodes of incremental growth between application.

ATTENTION: Use of this product in accordance with label directions is expected to result in normal growth of Roundup Ready Cotton, however, various environmental conditions, agronomic practices and other factors make it impossible to eliminate all risks associated with the use of this product, even when applications are made in conformance with the label specifications. In some cases, these factors can result in boll loss, delayed maturity and/or yield loss.

**Salvage treatment:** This treatment may be used after the 4-leaf stage of development. Use only where weeds threaten to cause the loss of the crop. One quart per acre may be applied either as an over-the-top application or as a postdirected treatment sprayed higher on the Cotton plants and over the weeds.

Note: Salvage treatments will result in significant boll loss, delayed maturity and/or yield loss. Do not make more than one salvage treatment per growing season.

**Weeds controlled:** For specific rates of application and instructions for control of various annual and perennial weeds, refer to the "ANNUAL WEEDS" section. This product, applied at 1-quart rate per acre will burndown or suppress the growth of the following perennial weeds and reduce crop competition:

Yellow and Purple nutsedge	Rhizome johnsongrass
Common bermudagrass	Silverleaf nightshade
Trumpetcreeper	Redvine

Fall preharvest application may be required for control of these perennial weeds. Do not use this product in tank mixtures with other herbicides for over-the-top applications as this may result in reduced weed control or crop injury.

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

**Preharvest applications:** This product may be applied for preharvest annual and perennial weed control as a broadcast treatment to Roundup Ready Cotton after 20% boll crack. Allow a minimum of 7 days between application and harvest. THE USE OF ADDITIVES FOR PREHARVEST APPLICATION TO ROUNDUP READY COTTON IS PROHIBITED.

**Note:** This product will not enhance the performance of harvest aids when applied to Roundup Ready Cotton. DO NOT APPLY THIS PRODUCT PREHARVEST TO CROPS GROWN FOR SEED.

**Note:** Nonionic surfactants which are labeled for use with postemergence herbicides may be used. When using additional surfactant, use 0.5% surfactant concentration (2 quarts per 100 gallons of spray solution) when using surfactant which contains at least 70% active ingredient, or a 1% surfactant concentration (4 quarts per 100 gallons of spray solution) for surfactant containing less than 70% active ingredient.

# For Cotton with the Roundup Ready Gene for Application (Arizona Only)

See "USE INFORMATION" and "MIXING" sections of this label for essential product performance information.

TYPES OF APPLICATIONS: Preplant, At-Planting, Preemergence, Over-the-top, Selective Equipment, Preharvest.

Maximum Allowable Combined Application Quan (qts./A)	tities Per Season
Combined total per year for all applications	8
Total of Preplant, At-planting, Preemergence applications	5
Total in-crop applications from ground cracking to lay-by	3.75
Total in-crop over-the-top from ground cracking to 4-leaf stage.	3
Total in-crop applications using selective equipment through lay-by	2
Maximum preharvest application rate	2

USE PRECAUTIONS: DO NOT combine these instructions with other use directions made for crop varieties that do not contain the Roundup Ready gene, see the "ANNUAL AND PERENNIAL CROPS (Alphabetical)" section of this label.

Sequential in-crop over-the-top or postdirected applications of this product must be at least 10 days apart and Cotton must have at least two nodes of incremental growth between applications.

Applications made in excess of maximum label rates are expected to result in boll loss, delayed maturity and/or yield loss and are the sole responsibility of the grower.

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

USE RESTRICTIONS: The combined total application of this product from Cotton emergence until harvest must not exceed 6 quarts per acre. No more than two over-the-top broadcast applications may be made from crop emergence through the 4-leaf (node) stage of development. Do not make more than two postdirected applications from the 5-leaf stage through lay-by. Allow a minimum of 7 days between application and harvest.

# Preplant, At-Planting, and Preemergence

USE INSTRUCTIONS: This product may be applied before, during or after planting Cotton.

## Over-the-Top

USE INSTRUCTIONS: This product may be applied by aerial or ground application equipment at rates up to 1 quart per acre per application postemergence to Roundup Ready Cotton from the ground cracking stage until the 4-leaf (node) stage of development (until the fifth true leaf reaches the size of a quarter). Unless otherwise directed in supplemental labeling, any single over-the-top broadcast application must not exceed 1 quart per

acre. Combined over-the-top applications between ground cracking until the 4-leaf (node) stage must not exceed 3 quarts per acre.

**NOTE:** For specific rates of application and instructions, refer to the "WEEDS CONTROLLED" section of this label.

## Selective Equipment

USE INSTRUCTIONS: This product may be applied in-crop using precision postdirected or hooded sprayers to Roundup Ready Cotton through lay-by. Unless otherwise directed in supplemental labeling, any single application using selective equipment must not exceed 1 quart per acre. Sequential in-crop applications using selective equipment may be made up to a maximum of 2 quarts per acre. At this stage, use postdirected equipment which directs the spray to the base of the Cotton plants. Avoid spray contact with Cotton leaves to the maximum extent possible. To minimize spray onto the leaves of the Cotton plants, place nozzles in a low position directing a horizontal spray pattern under the Cotton leaves to contact weeds in the row, and maintain low spray pressure (less than 30 psi). For best results, make applications while weeds are small (less than 3 inches).

USE PRECAUTIONS: 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.

USE RESTRICTIONS: The combined total of in-crop over-the-top plus selective equipment applications must not exceed 4 quarts per acre.

## Salvage Treatment

USE INSTRUCTIONS: From the ground cracking stage through lay-by, where weeds threaten to cause the loss of the crop, applications of up to 1.5 quarts per acre may be applied either as an over-the-top application or as a postdirected treatment sprayed higher on the Cotton plants and over the weeds.

NOTE: CROP TOLERANCE OF ROUNDUP READY COTTON HAS NOT BEEN FULLY TESTED AT THIS APPLICATION RATE. SALVAGE TREATMENTS ARE EXPECTED TO RESULT IN SIGNIFICANT BOLL LOSS, DELAYED MATURITY AND/OR YIELD LOSS AND TO THE EXTENT CONSISTENT WITH APPLICABLE LAW ARE THE SOLE RESPONSIBILITY OF THE GROWER.

USE RESTRICTIONS: No more than two salvage treatments must be used per growing season. The combined total of in-crop over-the-top plus selective equipment applications must not exceed 2.6 quarts per acre.

#### Preharvest

USE INSTRUCTIONS: This product may be applied for preharvest annual and perennial weed control as a broadcast treatment to Roundup Ready Cotton after 20 percent boll crack. Up to 2 quarts per acre of this product may be applied using either aerial or ground spray equipment.

**NOTE:** This product will not enhance the performance of harvest aids when applied to Roundup Ready Cotton. USE RESTRICTIONS: Allow a minimum of 7 days between application and harvest of Cotton. Do not apply this product preharvest to Roundup Ready Cotton grown for seed.

# For Control and Management of Glyphosate Resistant Horseweed (Marestail, *Conyza canadensis*) in Roundup Ready Cotton Varieties Only

USE INSTRUCTIONS: For ground applications, use 10 to 20 gallons of water per acre. For aerial applications, use 3 to 15 gallons of water per acre. For tank mix directions, read and carefully observe the cautionary statements and all other information appearing on the product labels, supplemental labeling or fact sheets published separately for all herbicides used.

#### Postdirected

Management of early season weed competition and the development of a crop height differential between Cotton and the Horseweed is often achieved by a combination of preplant burndown and postemergent overthe-top and/or directed applications of this product. These measures enhance the development of a height differential that is necessary to successfully make postdirected treatments. Make in-crop postdirected applications of MSMA (2 pounds active ingredient per acre) tankmixed with diuron (0.5 to 0.75 pounds active ingredient per acre) when the temperature is 80°F or higher.

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

### TANK MIXTURES OF THIS PRODUCT WITH ME-TOO-LACHLOR™

Apply this product as a tank mixture with Me-Too-Lachlor in water postemergence directed or postemergence over-the-top for control of emerged weeds as listed on this and the Me-Too-Lachlor labels as well as for residual preemergence weed control of the weeds listed on the Me-Too-Lachlor label. See the section "Over-the-Top" for use rates and timings of this product and follow the Me-Too-Lachlor label for its specified rates, method of application, and timing of application restrictions. DO NOT add fertilizer additives, surfactants and spray adjuvants or pesticides to this tank mixture if it is to be applied postemergence over-the-top to Cotton or crop injury may occur.

**Use Precautions:** Do not apply this tank mixture postemergence to Cotton varieties not designated as Roundup Ready. Postemergence over-the-top applications of this tank mixture may cause temporary injury such as necrotic spotting on the exposed Cotton leaves, which will not affect normal plant development. Do not apply postemergence over-the-top to Cotton past the growth stage limit. Do not use on sand or loamy sand soils in Gaines County, TX.

# Flex Cotton with Roundup Ready Gene

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

See "USE INFORMATION" and "MIXING, ADDITIVES, AND APPLICATION INSTRUCTIONS" section in this label for important product performance information.

The instructions provided in this section are specific to, and may only be used with, varieties designated as Roundup Ready Flex cotton. Applications described in this section on other than Roundup Ready Flex cotton will cause crop injury and reduced yields. DO NOT combine the instructions in this section, with those in the "ROUNDUP READY COTTON" section of this label, or with any other Roundup Ready cotton or Roundup Ready Flex cotton instructions on labeling for this or any other glyphosate-containing products. Drift of this product from an application made to Roundup Ready Flex cotton onto adjacent fields of post 4-leaf (node) Roundup Ready cotton may cause extensive injury including boll loss, delayed maturity and/or yield loss.

TYPES OF APPLICATION: Preplant, At-Planting, Preemergence, Postemergence (In-Crop), Preharvest

Maximum Allowable Combined Application Quantities (qts./A)	Per Season
Combined total per year for all applications	. 8
Total of all Preplant, At-planting, Preemergence applications	5
Total of all in-crop applications from ground cracking to 60% percent open bolls	6
Total of all in-crop applications between lay-by and 60 percent open bolls	2
Total of all in-crop applications from 60 percent bolls open to 7 days prior to harvest	2
Total of all in-crop applications from emergence through harvest	6

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

#### Preplant, Preemergence, At-Planting

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

TANK MIXTURES: This product may be tank mixed with 2,4-D 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 is labeled for application prior to planting or the emergence of cotton.

Read and follow label directions of all products in the tank mixture.

clomazone, diuron, flumioxazin, fluometuron, fomesafen, metolachlor, s-metolachlor, pendimethalin, prometyrn, pyrithiobac-sodium Caparol, Command, Cotoran, Cotton PRO, Direx, Dual MAGNUM, Dual II MAGNUM, Karmex, Meturon, Me-Too-Lachlor™ Herbicide, PARRLAY, Prowl H₂O, Reflex, Staple, Valor, Zorial

USE PRECAUTIONS: Refer to individual tank mix product label for restrictions and precautions; use according to the most restrictive precautionary statements for each product in the tank mixture.

USE 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: When applied in accordance with the label, this product will control listed annual grasses and broadleaf weeds in Roundup Ready Flex Cotton. To maximize yield potential, spray cotton early to eliminate competing weeds. Many perennial weeds will be controlled or suppressed with one or more applications of this product. Use an initial application of 1 quart per acre to control or suppress 1- to 3-inch tall annual grass and broadleaf weeds. This product may be applied by ground application equipment at rates up to 1.5 quarts per acre per application to Roundup Ready Flex Cotton. In addition to broadcast applications, postdirected equipment may be used to achieve more thorough weed coverage.

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

clethodim, fluazifop-P-butyl, fomesafen, metolachlor, s-metolachlor, pyrithiobac-sodium, quizalofop-p-ethyl, sethoxydim, trifloxysulfuron-sodium Assure II, Dual MAGNUM, Envoke, Fusilade, Me-Too-Lachlor Herbicide, Poast Plus, Select, Staple

Staple may cause leaf yellowing and/or leaf crinkling when applied postemergence (in-crop) to Roundup Ready Flex cotton. Dual Magnum and Me-Too-Lachlor Herbicide over the top of Roundup Ready Flex cotton may cause leaf injury in the form of necrotic spotting.

This product can be tank mixed with the following product for in-crop application using precision post-directed or hooded sprayer. Ensure that the specific product being used is labeled for application postemergence (in-crop) to cotton. Read and follow label directions of all product in the tank mixture.

carfentrazone-ethyl, diuron, flumioxazin, fluometuron, linuron, pendimethalin, prometyrn, pyrithiobac-sodium, trifloxysulfuron-sodium Aim, Caparol, Cotoran, Direx, Envoke, Layby-Pro, PARRLAY, Prowl H₂0, Staple, Valor Staple may cause leaf yellowing and/or leaf crinkling when applied postemergence (in-crop) in Roundup Ready Flex cotton.

USE PRECAUTIONS: The maximum rate of this product for any single in-crop application is 1.5 quarts per acre using ground application equipment. In-crop application rates above 1 quart of this product per acre made alone or with the addition of other crop chemical products containing surfactant may cause a crop response including leaf speckling or leaf necrosis. DO NOT ADD ADDITIONAL SURFACTANT OR ADDITIVES CONTAINING SURFACTANT TO THIS PRODUCT FOR OVER-THE-TOP APPLICATION TO ROUNDUP READY FLEX COTTON. Refer to individual tank-mix product label for restrictions and precautions; use according to the most restrictive precautionary statements for each product in the tank mixture.

USE RESTRICTIONS: Do not exceed a maximum rate of 1 quart of this product when making applications by air. Between lay-by and 60 percent open bolls, the maximum combined total rate of this product that may be applied is 2 quarts per acre. The maximum combined total rate of all applications made from crop emergence to 60 percent open bolls must not exceed 6 quarts per acre.

#### Preharvest

USE INSTRUCTIONS: This product may be applied to Roundup Ready Flex cotton up to 2 quarts per acre for annual and perennial weed control prior to harvest after 60 percent boll crack.

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

PRECAUTIONS AND RESTRICTIONS: Allow a minimum of 7 days between application and harvest of Roundup Ready Flex Cotton. DO NOT ADD ADDITIONAL SURFACTANT OR ADDITIVES CONTAINING SURFACTANT TO THIS PRODUCT FOR PREHARVEST APPLICATION TO ROUNDUP READY FLEX COTTON.

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

## **SOYBEANS WITH THE ROUNDUP READY GENE**

DREXEL CHEMICAL SPECIFY THE USE OF THIS PRODUCT FOR POSTEMERGENCE APPLICATION ONLY ON SOYBEAN VARIETIES WHICH HAVE THE ROUNDUP READY GENE.

Applying this product to Soybean varieties which are not designated as "Roundup Ready" will result in severe crop injury and yield loss. Avoid contact with foliage, green stems or fruit of crops or any desirable plants that do not contain the Roundup Ready gene, since severe injury will result. Roundup Ready varieties must be purchased from an authorized seed supplier. Crop safety and weed control performance are not warranted when this product is used in conjunction with seed from unauthorized sources or seed saved from previous year's production and replanted.

The "Roundup Ready" designation indicates that the Soybean contains a patented gene which provides tolerance to certain glyphosate-containing herbicides including this product. Information on Roundup Ready Soybeans is available from your seed supplier.

TYPES OF APPLICATIONS: Preplant, Preemergence, At-Planting, Postemergence, Preharvest, Postharvest.

#### **Application Instructions**

This product may be applied postemergence to Roundup Ready Soybeans from the cracking stage through the full flowering stage.

Preharvest Interval: Allow a minimum of 14 days between application and harvest of Soybeans.

Maximum Allowable Combined Application Quar (qts./A)	ntities Per Season*
Combined total per year for all applications	. 8
Total of Preplant, At-planting, Preemergence applications	5
Emergence to 8-leaf stage	3
Between 8-leaf stage and canopy closure	1
* The yearly maximum allowable amount of this product that can be applied also includes Glyfos Herbicide, Glyfos X-TRA, Glyfos AU, Roundup and Roundup Ultra.	other glyphosate-containing products, such as

PRECAUTIONS, RESTRICTIONS: See the "ROUNDUP READY CROPS" section of this label for precautionary instructions for use in Roundup Ready crops.

## Preplant, Preemergence, At-Planting

USE INSTRUCTIONS: This product may be applied before, during or after planting Soybeans.

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 single or multiple in-crop applications of this product from cracking to flowering is 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 which can be applied during flowering is 2 quarts per acre.

## Postemergence

USE INSTRUCTIONS: When applied as directed, this product will control labeled annual grasses and broadleaf weeds in Roundup Ready Soybeans. Applications of this product can be made in Roundup Ready Soybeans from emergence (cracking) throughout flowering. Refer to the "ANNUAL WEEDS RATE TABLE" of this label for specified rates for specific annual weeds. Make an initial application of 1 quart of this product 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 used up to 2 quarts per acre in any single in-crop application for control of annual weeds and where heavy weed densities 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 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.

USE RESTRICTIONS: The 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 is 2 quarts per acre. Allow a minimum of 14 days between application and harvest of Soybeans.

# Preharvest

USE INSTRUCTIONS: This product provides weed control when applied prior to harvest of Soybeans. Up to 1 quart per acre of this product can be applied by aerial or ground application. Maximum amount of this product which can be applied after loss of green color in Soybean pods until 14 days before harvest is 1 quart per acre by aerial or ground application. The maximum for any single in-crop application is 2 quarts per acre. The maximum combined total of this product which can be applied during flowering is 2 quarts per acre.

USE PRECAUTIONS: Avoid excessive seed shatter loss due to ground application equipment.

USE RESTRICTIONS: Allow a minimum of 14 days between final application and harvest of Soybean grain or feeding of Soybean grain, forage or hay.

# **Postharvest**

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

## Cropping Season

Combined total for the year for all applications of this product may not exceed 8 quarts per acre.

When used as directed, this product will control annual grasses and broadleaf weeds listed in Roundup Ready Soybeans. Many perennial grasses and broadleaf weeds will be controlled or suppressed with 1 or more applications of this product.

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

# **Ground Application**

Use the specified rates of this product in 5 to 20 gallons of spray solution per acre as a broadcast spray. Carefully select proper nozzle and spray pressure to avoid spraying a fine mist. For best results with ground

application equipment, use nozzles which provide a flat fan pattern. Check for even distribution of spray droplets.

# Aerial Application

Use the specified rates of this product in 3 to 15 gallons of water per acre. Do not exceed 1 quart of this product per acre. DO NOT APPLY DURING LOW LEVEL INVERSION CONDITIONS WHEN WINDS ARE GUSTY OR UNDER ANY OTHER CONDITIONS WHICH FAVOR DRIFT. DRIFT MAY CAUSE DAMAGE TO ANY VEGETATION CONTACTED TO WHICH TREATMENT IS NOT INTENDED. TO PREVENT INJURY TO ADJACENT DESIRABLE VEGETATION, APPROPRIATE BUFFER ZONES MUST BE MAINTAINED.

#### Rates for Annual Weeds

The following rates will provide control of annual grasses and broadleaf weeds listed in conventional and no-till Soybean production systems. Refer to the "ANNUAL WEEDS" section of this label for specified rates for specific annual weeds. Do not use this product in tank mixtures with other herbicides due to the potential for crop injury and/or weed antagonism, and to rotational crop restrictions of the tank mixed partner.

This product may be used at a rate of up to 64 fluid ounces (2 quarts) per acre in any single application for control of annual weeds where heavy weed densities exist. The maximum combined total of this product which can be applied during flowering is 2 quarts per acre.

**Note:** The following are based on a clean start at planting by using a burndown application or tillage to control existing weeds before Soybean emergence. In stale seedbed or no-till systems, a preplant burndown treatment of 16 to 64 fluid ounces (0.5 to 2 quarts) per acre of this product may be applied to control existing weeds prior to crop emergence.

#### Midwest/Mid-Atlantic Uses

**Narrow-row or drilled Soybeans:** A single in-crop application of this product will provide effective control of labeled weeds. For best results, make an initial application of 32 fluid ounces (1 quart) per acre on 4 to 8 inch weeds. Weeds will generally be 4 to 8 inches tall 3 to 5 weeks after planting. If the initial application is delayed and weeds are 8 to 18 inches tall, use 48 fluid ounces (1.5 quarts) per acre for best results.

Under adverse conditions such as drought, hail, wind damage or a poor Soybean stand that slows or delays canopy closure, a sequential application of this product at 24 to 32 fluid ounces per acre may be necessary to control late flushes of weeds. The combined total applications of this product made in-crop is not to exceed 96 fluid ounces per acre.

**Wide-row Soybeans:** An in-crop application of this product will provide effective control of the initial stand of labeled weeds. For best result, make an initial application of 32 fluid ounces (1 quart) per acre on 4 to 8 inch weeds. Weeds will generally be 4 to 8 inches tall 3 to 5 weeks after planting. If new flushes of weeds occur, they can be controlled by sequential applications of this product.

PP 4 /61 /43
Rate (fl. oz./A)
24
32
48

Black nightshade, Pennsylvania smartweed, Velvetleaf and Waterhemp: Apply 32 fluid ounces (1 quart) per acre to weeds 3 to 6 inches tall and 48 fluid ounces (1.5 quarts) to weeds up to 12 inches tall. For Morningglory species, apply 32 fluid ounces (1 quart) to weeds up to 4 inches and 48 fluid ounces (1.5 quarts) to weeds up to 6 inches.

Giant ragweed: Apply 32 fluid ounces (1 quart) per acre when the weed is 8 to 12 inches tall to avoid the need for sequential application.

Some weeds such as Black nightshade, Burcucumber, Giant ragweed, Shattercane, Wild proso millet and Woolly cupgrass with multiple germination times may require a sequential application of this product.

Suppressed or stunted weeds may also require sequential application. Make sequential applications after some regrowth has occurred. Use a minimum of 16 fluid ounces per acre of this product for sequential applications.

The combined yearly total of in-crop applications postemergence of this product must not exceed 96 fluid ounces (3 quarts) per acre.

#### Southeast Uses

**Narrow-row, drilled or wide-row Soybeans:** A single in-crop application of this product will provide effective control of the initial stand of labeled weeds. For best results, make an initial application of 32 fluid ounces (1 quart) per acre on 3 to 6 inch weeds. Weeds will generally be 3 to 6 inches tall 2 to 3 weeks after planting.

Initial Treatment	
Weed Height (inches)	Rate (fl. oz./A)
3 to 6	32
6 to 12	. 48

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

Sequential Application* (if needed)	
Weed Height (inches)	Rate (fl. oz./A)
2 to 3	16
3 to 6	24
6 to 12	32
Combined total application in-crop shall not exceed 96 fl. ozs. per acre	· · · · · · · · · · · · · · · · · · ·

Florida pusley, Hemp sesbania and Spurred anoda: Apply 32 fluid ounces (1 quart) per acre to weeds 2 to 4 inches tall for the initial application. Apply 32 fluid ounces (1 quart) per acre when these weeds are 3 to 6 inches tall if a sequential application is needed.

For Black nightshade, Groundcherry, Morningglory and Pennsylvania smartweed, apply the following rates for the initial application:

Weed Height (inches)	Rate (fl. oz./A)
1 to 3	24
3 to 6	32
6 to 12	48

Some weeds, such as Black nightshade, broadleaf Signalgrass, Burcucumber, Sicklepod and Texas panicum with multiple germination times may require a sequential application of this product. Suppressed or stunted weeds may also require sequential application. Make sequential applications after some regrowth has occurred. Use a minimum of 16 fluid ounces per acre of this product for sequential applications. The combined total of all in-crop applications of this product postemergence must not exceed 96 fluid ounces per acre.

## Delta/Mid-South Uses

Narrow-row, drilled or wide-row Soybeans: A single in-crop application of this product will provide effective control of the initial stand of labeled weeds. New flushes of weeds can be controlled by sequential applications of this product. Combined yearly total of this product is not to exceed 96 fluid ounces per acre. For best results, make an initial application of 32 fluid ounces (1 quart) per acre on 2 to 4 inch weeds. Weeds will generally be 2 to 4 inches tall in 2 to 3 weeks after planting.

Initial Treatment	
Weed Height (inches)	Rate (fl. ozs./A)
2 to 4	32
5 to 12	48

Sequential Application*		
Weed Height (inches)	Rate (fl. ozs./A)	
2 to 3	16	
3 to 6	24	
6 to 12	32	
* Combined total application in-crop shall not exceed 96 fl. ozs. per acre.		

Hemp sesbania and Spurred anoda: Apply a sequential treatment of 32 fluid ounces (1 quart) per acre on weeds 3 to 6 inches tall if required.

Some weeds such as Black nightshade, broadleaf signalgrass, Burcucumber, Sicklepod and Texas panicum, with multiple germination times may require a sequential application of this product.

Suppressed or stunted weeds may also require sequential application. Make sequential application after some regrowth has occurred. Use a minimum of 16 fluid ounces per acre of this product for sequential applications. The combined total applications postemergence of this product must not exceed 96 fluid ounces (3 quarts) per acre.

## Perennial Weeds Rate Uses

A 32 to 64 fluid ounces (1 to 2 quarts) per acre rate (single or sequential 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 Wirestern muhly.

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

**Note:** Nonionic surfactants which are labeled for use with postemergence herbicides may be used. When using additional surfactant, use 0.5% surfactant concentration (2 quarts per 100 gallons of spray solution) when using surfactant which contain at least 70% active ingredient or a 1% surfactant concentration (4 quarts per 100 gallons of spray solution) for those surfactants containing less than 70% active ingredient.

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

# Soybeans with Roundup Ready Gene in the State of California Only

The California Department of Pesticide Regulation has reviewed and authorized the use of this product for applications in Roundup Ready Soybeans. Applicators must read and follow the Directions for Use specified in the "SOYBEANS WITH THE ROUNDUP READY GENE" section of this label.

# For Control and Management of Glyphosate Resistant Horseweed (Marestail, *Conyza canadensis*) in Roundup Ready Soybean Varieties Only

USE INSTRUCTIONS: For ground applications, use 10 to 20 gallons of water per acre. For aerial applications, use 3 to 15 gallons of water per acre. For tank mixtures, read and carefully observe the cautionary statements and all other information appearing on the product labels, supplemental labeling or fact sheets published separately for all herbicides used.

#### in-crop

Control Horseweed prior to planting using preplant burndown treatments. In in-crop Roundup Ready Soybeans, apply a tank mixture of this product (1 quart per acre) with Amplify® (0.3 ounce per acre). Use this treatment as a salvage treatment only for a Horseweed infestation that was not controlled preplant. Apply between full emergence of the first trifoliate leaf and 50% flowering stage of Soybeans. At the time of treatment, Horseweed has to be 6 inches or less in height.

#### SUGAR BEETS WITH THE ROUNDUP READY GENE

TYPES OF APPLICATIONS: Preplant, Preemergence, At-Planting, Postemergence.

Maximum Allowable Combined Application Quantities Per Season (qts./A)		
Combined total per year for all applications	8	
Total of Preplant, At-planting, Preemergence applications	5	
Emergence to 8-leaf stage	2.5	
Emergence to 8-leaf stage	2	

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

USE RESTRICTIONS: The combined total application 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 1.5 quarts per acre. The maximum rate for any single application 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.

# Preplant, Preemergence, At-Planting

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

## Postemergence

USE INSTRUCTIONS: This product may be applied postemergent over-the-top to Roundup Ready Sugar beets 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 "ANNUAL WEEDS" section of this label for specified rates for specific annual weeds. This product will control or suppress most perennial weeds. For some perennial weeds, repeat applications may be required to eliminate crop competition throughout the growing season.

# STORAGE AND DISPOSAL

Do not contaminate water, food or feed by storage or disposal.

**PESTICIDE STORAGE:** Store in a cool, dry location. Avoid storage at high temperatures. Keep container tightly sealed. Avoid contamination with acids or alkalies. Do not stack more than 2 pallets high to prevent crushing. Keep containers away from any source of puncture. Store in original container only.

Pesticides should be separated during storage to prevent cross-contamination of other pesticides, fertilizer, food and feed. Storage area should preferably be locked to prevent admittance by unauthorized or unknowledgeable persons. If the container is damaged and leaking or material has been spilled, follow these procedures:

- 1. Cover spill with absorbent material.
- 2. Sweep into disposal container.
- 3. Wash area with detergent and water and follow with clean water rinse.
- 4. Do not allow to contaminate water supplies.
- 5. Dispose of according to instructions below.

**PESTICIDE DISPOSAL:** Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

#### CONTAINER DISPOSAL:

**Nonrefillable Container (rigid material; less than 5 gallons):** Nonrefillable container. Do not reuse or refill this container. Offer for recycling, if available. Clean container 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 one-fourth 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. Dispose of empty container in a sanitary landfill or by incineration, or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.

Nonrefillable Container (rigid material; 5 gallons up to < 250 gallons): Nonrefillable container. Do not reuse or refill this container. Offer for recycling, if available. Clean container promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container one-fourth 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. Dispose of empty container in a sanitary landfill or by incineration, or if allowed by State and local authorities, by burning. If burned, stay out of smoke.

Refillable Container (≥ 250 gallons & Bulk): Refillable container. Refill this container with pesticide only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10% full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times.

# WARRANTY-CONDITIONS OF SALE

OUR DIRECTIONS FOR USE of this product are based upon tests believed reliable. Follow directions carefully. Timing and method of application, weather and crop conditions, mixtures with other chemicals not specifically directed and other influencing factors in the use of this product are beyond the control of the Seller. To the extent consistent with applicable law, Buyer assumes all risks of use, storage and handling of this material not in strict accordance with directions given herewith. To the extent consistent with applicable law, in no case shall the Manufacturer or the Seller be liable for consequential, special or indirect damages resulting from the use or handling of this product when such use and/or handling is not in strict accordance with directions given herewith. The foregoing is a condition of sale by the Seller and is accepted as such by the Buyer.

IMITATOR, ME-TOÓ-LACHLOR, MIX, QUIK-QUAT, SURF-AC, and the Drexel logo are trademarks or registered trademarks of Drexel Chemical Company. Roundup and Roundup Ready are registered trademarks of Monsanto. All other brand names, product names, or trademarks belong to their respective holders.

#### **Optional Marketing Statements:**

- Compares to Roundup<sup>®</sup>
- Contains the same active ingredient used in Roundup®
- Same Active Ingredient as Roundup<sup>®</sup>
- Similar to Roundup<sup>®</sup>
- Grass & Weed Killer
- · Weed & Grass Killer

- One Quart Makes well over 10 gallons of liquid spray. Read label before using.
  One Gallon Makes well over 40 gallons of ready to use spray. Read label before using.
  2.5 Gallons Makes well over 100 gallons of ready to use spray. Read label before using.
- Contains 3 pounds glyphosate acid, the active ingredient used in Roundup<sup>®</sup>
- The broad spectrum postemergence herbicide for agricultural, industrial, turf, and ornamental weed control
- Selective broad spectrum weed control in Roundup Ready<sup>®</sup> Crops
- · Nonselective, broad spectrum weed control for many cropping systems, farmsteads, and conservation reserve program acres
- 41% Glyphosate isopropylamine salt with full surfactant load
- · 41% Glyphosate Concentrate with surfactant
- · Complete broad spectrum postemergence herbicide for vegetation management, ornamental weed control, and nonplanted areas around residential, industrial locations, and their immediate vicinities
- · For use around residential, industrial, institutional locations and their immediate vicinities
- · Controls many annual and perennial grasses and broadleaf weeds as listed

- Controls many annual and pererinal grasses and broadlean weeds as listed
  Herbicide for Roundup Ready<sup>®</sup> Crops and Expanded to Roundup Ready<sup>®</sup> Flex Cotton use
  Now for Roundup Ready<sup>®</sup> Flex Cotton
  For use on Roundup Ready<sup>®</sup> Flex Cotton
  Herbicide for Roundup Ready<sup>®</sup> Crops, And For use on Roundup Ready<sup>®</sup> Flex Cotton
  Approved for Roundup Ready<sup>®</sup> Flex Cotton
- •41% Glyphosate Concentrate with Full Surfactant Load. For use on Roundup Ready® crops, including flex cotton.