

# U.S. ENVIRONMENTAL PROTECTION AGENCY

Office of Pesticide Programs Registration Division (7505P) Ariel Rios Building 1200 Pennsylvania Ave., NW Washington, D.C. 20460

NOTICE OF PESTICIDE:

x RegistrationReregistration(under FIFRA, as amended)

EPA Reg. Number:

2749-566

Date of Issuance:

MAR 5 2012

Term of Issuance:

unconditional

Name of Pesticide Product:

Glyfine K Plus Herbicide

Name and Address of Registrant (include ZIP Code):

Aceto Agricultural Chemicals Corporation 4 Tri Harbor Court

Port Washington, NY 11050

Note: Changes in labeling differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Registration Division prior to use of the label in commerce. In any correspondence on this product always refer to the above EPA registration number.

On the basis of information furnished by the registrant, the above named pesticide is hereby registered/reregistered under the Federal Insecticide, Fungicide and Rodenticide Act. Registration is in no way to be construed as an endorsement or recommendation of this product by the Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.

The Basic Confidential Statement of Formula (CSF) dated 10/15/11 is acceptable.

This product is registered in accordance with FIFRA section 3(c)(5) provided that you:

- 1. Submit and/or cite all data required for registration review/reregistration of your product when the Agency requires all registrants of similar products to submit data.
- 2. Make the following label revision:
  - a. Revise "EPA REG. NO. 2749-LAA" to "EPA REG. NO. 2749-566." Assure that the
    establishment number and net contents are also added to the final printed label.
- 3. Submit one (1) copy of the revised final printed label for the record.

If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA sec. 6(e). Your release for shipment of the product constitutes acceptance of these conditions. A stamped copy of the label is enclosed for your records.

If you have any questions regarding this notice, please contact Emily Hartman of my staff at 703-347-0189 or hartman.emily@epa.gov.

Signature of Approving Official:

Kable Bo Davis Project Manager 25 Herbicide Branch

Registration Division (7505P)

Date:

MAR 5 2012

# **GLYFINE™ K Plus Herbicide**

(Glyphosate Plus Surfactant)

GROUP

9

HERBICIDE

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

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

Read "CONDITIONS OF SALE AND WARRANTY" before buying or using. If terms are not acceptable, return product at once unopened.

Glyfine™ K Plus Herbicide is normally [mainly] a non-selective, post-emergent, systemic herbicide with broad spectrum control of many annual weeds, perennial weeds, woody brush and trees for use in the following annual and perennial crops; tree, vine and shrub crops; pasture grasses, forage legumes and rangelands; RoundUp Ready® crops and noncrop use around the farmstead:

Cereal and grain crops

Corn

Cotton

Fallow systems

Grain sorghum (milo)

Herbs and Spices

Oil seed crops

Soybeans

Sugarcane

Christmas Tree Plantation

Miscellaneous crops

Vegetable crops

Berry crops

Citrus crops

Christmas trees and other non-food tree crops

Miscellaneous tree food crops

Pome fruit

Stone fruit

Tree nuts

Tropical and subtropical trees and fruits

Vine crops

Alfalfa, clover and other forage legumes

Conservation Reserve Program (CRP)

Grass seed or sod production

Pasture grasses

Rangelands

Roundup Ready alfalfa, canola (spring and winter varieties) corn hybrids with RoundUp Ready 2

Technology, cotton, Flex cotton, Soybeans, 2 Yield soybeans and sugar beet

Weed control and trim-and-edge

Greenhouse/shade house

Chemical mowing

Cut stumps

Habitat management

ACCEPTED with COMMENTS In EPA Letter Dated:

MAR 5 2012

Under the Federal Insecticide, Fungicide, and Rodenticide Act as amended, for the pesticide registered under EPA Reg. No.

2749-566

ACTIVE INGREDIENT:

*Glyphosate, N-(phosphonomethyl) glycine, in the form of its potassium salt	48.7%
OTHER INGREDIENTS:	51.3%
TOTAL	100.0%

<sup>\*</sup> Contains 660 grams per liter or 5.5 pounds per U.S. gallon of the active ingredient glyphosate, in the form of its potassium salt. Equivalent to 540 grams per liter or 4.5 pounds per U.S. gallon of the acid, glyphosate.

# KEEP OUT OF REACH OF CHILDREN CAUTION

FIRST AID			
IF IN EYES:	<ul> <li>Hold eye open and rinse slowly and gently with water for 15-20 minutes.</li> <li>Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.</li> <li>Call a poison control center or doctor for treatment advice.</li> </ul>		
IF ON SKIN	<ul> <li>Take off contaminated clothing.</li> <li>Rinse skin with plenty of water for 15 to 20 minutes.</li> </ul>		
	HOT LINE NUMBER		

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. FOR MEDICAL EMERGENCIES INVOLVING THIS PRODUCT, CALL CHEMTREC® TOLL FREE 1-800-424-9300 or 1-703-527-3887. ..

FOR CHEMICAL SPILL, LEAK, FIRE, EXPOSURE OR MEDICAL EMERGENCY INVOLVING THIS PRODUCT CALL CHEMTREC® TOLL FREE 1-800-424-9300 or 1-703-527-3887.

SEE BOOKLET FOR ADDITIONAL PRECAUTIONARY STATEMENTS AND USE DIRECTIONS

EPA Reg. No. 2749-<del>LAA</del> 566 EPA Est. No. XXX NET CONTENTS: XXX. (XXX Liters)

Manufactured For: Aceto Agricultural Chemicals Corporation 4 Tri Harbor Court Port Washington, NY 11050



# PRECAUTIONARY STATEMENTS Hazards to Humans and Domestic Animals CAUTION

Causes moderate eye irritation. Avoid contact with eyes, skin or clothing.

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

PERSONAL PROTECTIVE EQUIPMENT: (PPE)

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

Applicators and other handlers must wear: long-sleeved shirt and long pants, socks, shoes, and chemical-resistant gloves made of any waterproof material such as polyethylene or polyvinyl chloride. Follow manufacturer's instructions for cleaning / maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

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

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

IMPORTANT: When reduced PPE is worn because a closed system is being used, handlers must be provided all PPE specified above for "applicators and other handlers" and have such PPE immediately available for use in an emergency, such as a spill or equipment breakdown.

# **User Safety Recommendations:**

Users should:

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

#### **ENVIRONMENTAL HAZARDS**

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

#### PHYSICAL OR CHEMICAL HAZARDS

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

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

Read the entire label before using this product. Use only according to label instructions. Read "CONDITON of SALE and WARRANTY" before buying or using. If terms are not acceptable, return product at once unopened.

#### **DIRECTIONS FOR USE**

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. This product can only be used in accordance with the Directions for Use on this label or in separately published Aceto supplemental labeling.

The following paragraph is reserved and will only appear on final printed labeling for products under this registration if and when required by EPA.

ENDANGERED SPECIES PROTECTION REQUIREMENTS: This product may have effects on federally listed threatened or endangered species or their critical habitat in some locations. When using this product, you must follow the measures contained in the Endangered Species Protection Bulletin for the county or parish in which you are applying the pesticide. To determine whether your county or parish has a Bulletin, and to obtain that Bulletin, consult <a href="http://www.epa.gov/espp/">http://www.epa.gov/espp/</a>,or call 1-800-447-3813 no more than 6 months before using this product. Applicators must use Bulletins that are in effect in the month in which the pesticide will be applied. New Bulletins will generally be available from the above sources 6 months prior to their effective dates.

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulations.

#### AGRICULTURAL USE REQUIREMENTS

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

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

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil or water, wear: coveralls, shoes plus socks and chemical-resistant gloves made of any waterproof material.

#### NON-AGRICULTURAL USE REQUIREMENTS

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

Keep people and pets off treated areas until spray solution has dried.

FOR CHEMICAL SPILL, LEAK, FIRE, EXPOSURE OR MEDICAL EMERGENCY INVOLVING THIS PRODUCT CALL CHEMTREC® TOLL FREE 1-800-424-9300 or 1-703-527-3887.

#### PRODUCT INFORMATION

**Product Description:** This product is a non-selective, post-emergent, systemic herbicide with broad spectrum control of many annual weeds, perennial weeds, woody brush and trees. It provides selective broad spectrum weed control in Roundup Ready crops. It demonstrates no soil residual activity. The formulation is a water miscible concentrate. Do not add surfactants, additives containing surfactants, buffering agents or pH adjusting agents to the spray solution when this product is the only pesticide being applied unless otherwise directed. It can be applied through most standard industrial or field-type sprayers after dilution and thorough mixing with water or other carriers according to label instructions. See the "MIXING" section of this label for instructions regarding other additives.

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

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

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

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

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

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

**Spray Coverage:** For best results, spray coverage must be uniform and complete. Do not spray weed foliage to the point of runoff.

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

**No Soil Activity:** Weeds must be emerged at the time of application to be controlled by this product. Weeds germinating from seed after application will not be controlled. Non-emerged plants arising from unattached underground rhizomes or root stocks of perennials will not be affected by the herbicide and will continue to grow.

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

Annual Maximum Use Rate: Except as otherwise specified in the crop section of this label, the combined total of all treatments must not exceed 5.3 qts. of this product (6 lbs. of glyphosate acid) per acre per year. For applications in noncrop sites or in tree, vine, or shrub crops, the combined total of all treatments must not exceed 7 qts. of this product (8 lbs. of glyphosate acid) per acre per year. The maximum use rates stated throughout this product's labeling apply to this product combined with the use of all other herbicides containing glyphosate or sulfosate as the active ingredient, whether applied as mixtures or separately. Calculate the application rates and ensure that the total use of this and other glyphosate or sulfosate containing products does not exceed stated maximum use rate.

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

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

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

Management Guidelines for Glyphosate-Resistant Biotypes

Note: Appropriate testing is critical in order to determine if a weed is resistant to glyphosate. To determine if resistance in any particular weed biotype has been confirmed in your area, visit on the Internet www.weedresistancemanagement.com or www.weedscience.org. For more information see the "ANNUAL WEEDS RATE SECTION" and "PERENNIAL WEEDS RATE SECTION" of this label. Directions for the control of biotypes confirmed to be resistant to glyphosate are made available on separately published supplemental labeling or Fact Sheets for this product and can be obtained from your local retailer.

Since the occurrence of new glyphosate-resistant weeds cannot be determined until after product use and scientific confirmation, Aceto Agricultural Chemicals Corporation is not responsible for any losses that may result from the failure of this product to control glyphosate-resistant weed biotypes. The following good agronomic practices are guidelines to reduce the spread of confirmed glyphosate "resistant biotypes:

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

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

#### MIXING

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

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

# Mixing with Water:

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

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

Tank Mixture Partners: To improve this product's effectiveness, apply in combination with other pesticide products that are registered for the same crop and application techniques. This product does not provide residual weed control. For subsequent residual weed control, follow a label-approved herbicide program. A list of potential herbicide tank mixture partners is provided in the use direction section under each crop. This list is an example of products used but is not an all inclusive list. For current information on the best tank mixture partner in your area, consult with the local dealer, distributor or State Agricultural Extension service.

Refer to the partner product label for important information in regards to specific crops, use rates, application instructions, spray additive requirements, weeds controlled, the size range of

weeds that are to be treated, geographic and application restrictions including pre-harvest intervals and crop rotation information.

Follow the specifications listed on the most restrictive label when planning and applying the tank mixture combination. Be sure to determine if the partner product is registered in the state for the specific crop, timing, method of application, etc. before use.

Not all products listed on this label are registered for use in California. Check the registration status of each partner product in California before using.

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.

# **Tank Mixing Procedure:**

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

Mix labeled tank mixtures of this product as follows:

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

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

#### Mixing for Hand-Held Sprayers

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

#### **Spray Solution**

Desired Volume	Amount of Glyfine™ K Plus Herbicide					
	0.4%	0.7%	1%	1.5%	4%	7%
1 Gallon	0.5 oz.	1 oz.	1.3 oz.	2 oz.	5 oz.	9 oz.
25 Gallon	0.8 pt.	0.7 qt.	1 qt.	1.5 qt.	4 qt.	7 qt.
100 Gallon	1.6 qt.	2.8 qt.	1 gal.	1.5 gal.	4 gal.	7 gal.

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

#### Surfactants

Although not normally required, surfactants or wetting agents that are labeled for use with herbicides can be added to the spray solution. Surfactant addition is suggested at water carrier volumes greater than 30 gallons per acre or at application rates below 16 fl. oz of this product per acre.

Use nonionic surfactants (NIS) that are labeled for use with herbicides. Do not reduce rates of this product herbicide when adding surfactants. When adding additional NIS, the typical use rate is 0.25 - 0.5% NIS concentrate (1 - 2 qts. per 100 gal. of spray mixture) when using NIS containing at least 70% active ingredient content or 1% NIS concentrate (4 qts. per 100 gal.) when using NIS containing less than 70% active ingredient. Do not add surfactants, additives containing surfactants, buffering agents or pH adjusting agents to the spray solution when this product is the only pesticide being applied unless otherwise directed. DO NOT ADD ADDITONAL SURFACTANT OR ADDITIVIES CONTAINING SURFACTANTS TO THIS PRODUCT FOR PRE-HARVEST APPLICATION TO COTTON.

Read and carefully observe precautionary statements and other information appearing on the additive's label.

#### **Ammonium Sulfate**

The addition of 1 - 2 % dry ammonium sulfate by weight or 8.5 - 17 pounds per 100 gallons of water may increase the performance of this product, particularly under hard water conditions, drought conditions or when tank mixed with certain residual herbicides on annual and perennial weeds. The equivalent rate of ammonium sulfate in a liquid formulation may also be used. Ensure that dry ammonium sulfate is completely dissolved in the spray tank before adding herbicides. Thoroughly rinse the spray system with clean water after use to reduce corrosion.

**NOTE:** When using ammonium sulfate, apply this product at rates specified in this label. Lower rates will result in reduced performance.

#### Colorants or Dyes

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

#### **Drift Control Additives**

Drift control additives may be used with all equipment types, except wiper applicators, sponge bars and Controlled Droplet Applicator (CDA) equipment. When a drift control additive is used, read and carefully observe the precautionary statements and all other information appearing on the additive label. The use of drift control additives can affect spray coverage which may result in reduced performance.

#### **APPLICATION EQUIPMENT AND TECHNIQUES**

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

Aerial - Fixed Wing and Helicopter

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

**Hand-Held or Backpack Equipment** – Backpack sprayers, pump-up pressure sprayers, handguns, handwands, mistblowers\*, lances and other hand-held and motorized spray equipment used to direct spray onto weed foliage.

\* THIS PRODUCT IS NOT REGISTERED IN CALIFORNIA OR ARIZONA FOR USE IN MISTBLOWERS.

Selective Equipment - Recirculating sprayers, shielded and hooded sprayers, wiper applicators and

sponge bars.

Injection Systems - Aerial or ground injection sprayers.

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

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

#### **AERIAL EQUIPMENT**

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

Use the specified rates of this herbicide in 3 - 15 gallons of water per acre unless otherwise specified on this label. Unless otherwise specified, do not exceed 44 fl. oz. of this product per acre. Refer to the individual use area sections of this label for specified volumes and application rates.

For aerial application in Arkansas and California or specific counties therein, refer to the "Aerial Application" section of this product label in that state or county for specific instructions, restrictions and requirements.

THIS PRODUCT PLUS DICAMBA TANK MIXTURES MAY NOT BE APPLIED BY AIR IN CALIFORNIA.

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 the treatment was not intended.

Avoid direct application to any body of water.

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

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

# **AERIAL SPRAY DRIFT MANAGEMENT**

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

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

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

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

#### Importance of Droplet Size

The most effective way to reduce drift potential is to apply large droplets. The best drift management strategy is to apply the largest droplets that provide sufficient coverage and control. Applying larger

droplets reduces drift potential, but will not prevent drift if applications are made improperly, or under unfavorable environmental conditions (see "Wind", "Temperature and Humidity", and "Temperature Inversion").

# **Controlling Droplet Size**

- Volume Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher rated flows produce larger droplets.
- Pressure Use the lower spray pressures listed for the nozzle. Higher pressure reduces droplet size
  and does not improve canopy penetration. When higher flow rates are needed, use higher flow rate
  nozzles instead of increasing pressure.
- Number of Nozzles Use the minimum number of nozzles that provide uniform coverage.
- Nozzle Orientation Orienting nozzles so that the spray is released backwards, parallel to the airstream, will produce larger droplets than other orientations. Significant deflection from the horizontal will reduce droplet size and increase drift potential.
- Nozzle Type Use a nozzle type that is designed for the intended application. With most nozzle
  types, narrower spray angles produce larger droplets. Consider using low-drift nozzles. Solid stream
  nozzles oriented straight back produce larger droplets than other nozzle types.
- Boom Length For some use patterns, reducing the effective boom length to less than 3/4 of the wingspan or rotor length may further reduce drift without reducing swath width.
- Application Height Applications must not be made at a height greater than 10 feet above the top of the largest plants unless a greater height is required for aircraft safety. Making applications at the lowest height that is safe reduces exposure of droplets to evaporation and wind.

# **Swath Adjustment**

When applications are made with a cross-wind, the swath will be displaced downwind. Therefore, on the up and downwind edges of the field, the applicator must compensate for this displacement by adjusting the path of the aircraft upwind. Swath adjustment distance should increase, with increasing drift potential (higher wind, smaller drops, etc.).

#### Wind

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

# Temperature and Humidity

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

#### Temperature Inversion

Applications must not occur during a temperature inversion because drift potential is high. Temperature inversions restrict vertical air mixing, which causes small suspended droplets to remain in a concentrated cloud. This cloud can move in unpredictable directions due to the light variable winds common during inversions. Temperature inversions are characterized by increasing temperature with altitude and are common on nights with limited cloud cover and light to no wind. They begin to form as the sun sets and often continue into the morning. Their presence can be indicated by ground fog; however, if fog is not present, inversions can also be identified by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a connected cloud (under low wind conditions) indicates an inversion, while smoke that move upwards and rapidly dissipates indicates good vertical air mixing.

#### **Sensitive Areas**

This product must only be applied when the potential for drift to adjacent sensitive areas (e.g., residential areas, bodies of water, known habitat for threatened or endangered species, non-target crops) is minimal (e.g., when wind is blowing away from the sensitive areas).

# FOR AERIAL APPLICATION IN CALIFORNIA ONLY, INCLUDING FRESNO COUNTY.

See "PRODUCT INFORMATION" and 'MIXING" sections of this label for essential product performance

information.

See the appropriate section of this label for specific use of this product in individual crops.

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.

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

THIS PRODUCT PLUS DICAMBA TANK MIXTURES MAY NOT BE APPLIED BY AIR IN CALIFORNIA.

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

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 10 miles per hour toward desirable vegetation may require buffer zones in excess of 500 feet.
- 4. Do not apply when winds are in excess of 10 miles per hour or when inversion conditions exist.

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

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

#### Applicable Area

The area contained inside the following boundaries within Fresno County, California.

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

#### Information

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

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

#### Written Recommendations

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

have been satisfied.

# **Aerial Applicator Training and Equipment**

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

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

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

#### ARKANSAS ONLY

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

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

Applications typically are made with the nozzle release point at 8 - 15 feet above the top of the target plants unless a greater height is required for aircraft safety. The distance of the outermost nozzles on the boom must not exceed 75% of the length of the wingspan or rotor. In many cases reducing this distance - 65% of the length of the wingspan or rotor will improve drift control without affecting the swath width.

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

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

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

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

# **GROUND BROADCAST EQUIPMENT**

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

#### HAND-HELD AND BACKPACK EQUIPMENT

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

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

#### SELECTIVE EQUIPMENT

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

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

# AVOID CONTACT OF HERBICIDE WITH DESIRABLE VEGETATION.

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

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

#### Shielded and Hooded Applicators

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

This equipment must be set up and operated in a manner that avoids bouncing or raising the hoods off the ground in any way. If the hoods are raised, spray particles may escape and come into contact with the crop causing damage or destruction of the crop. Avoid operation on rough or sloping ground where the spray hoods might be raised off the ground.

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

These procedures will reduce the potential for crop injury:

- The spray hoods must be operated on the ground or skimming across the ground.
- Leave at least an 8 inch untreated strip over the drill row. For example, if the crop row width is 38 inches, the maximum width of the spray hood must be 30 inches.
- Maximum tractor speed: 5 mph to avoid bouncing of the spray hoods.
- Maximum wind speed: 10 mph.
- · Use low-drift nozzles that provide uniform coverage within the treated area.

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

# **Wiper Applicators**

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

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

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

Do not use wiper equipment when weeds are wet.

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

Do not add surfactant to the herbicide solution.

For rope or sponge wick applicators: Mix 3 – 6 qts. of this product in 2 gallons of water to prepare a 37.5 - 75% solution. Apply this solution to weeds listed in this section.

For panel applicators: Solutions ranging from 33% - 100% of this product in water may be used.

# INJECTION SYSTEMS

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

# CONTROLLED DROPLET APPLICATOR (CDA) EQUIPMENT

The rate of this product applied per acre by vehicle-mounted CDA equipment must not be less than the amount specified in this label when applied by conventional broadcast equipment. For vehicle-mounted CDA equipment, apply 2 - 15 gallons of water per acre.

For the control of annual weeds with hand-held CDA units, apply a 20% solution of this product at a flow rate of 2 fl. oz. per minute and a walking speed of 1.5 mph (1 qt. per acre). For the control of perennial weeds, apply a 20 - 30% solution of this product at a flow rate of 2 fl. oz. per minute and a walking speed of 0.75 mph (2 – 3 qt. per acre).

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

#### ANNUAL AND PERENNIAL CROPS (Alphabetical)

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

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

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

#### **Use Instructions:**

Apply this product during fallow intervals preceding planting, prior to planting or transplanting, at-planting, or pre-emergent to annual and perennial crops listed in this label, except where specifically limited. For any crop <u>not</u> listed in this label, applications must be made at least 30 days prior to planting. Unless otherwise specified, weed control applications may be made according to the rates listed in the annual, perennial and woody brush tables in this label. Repeat applications may be made up to a maximum of 5.3 qts. per acre per year.

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

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

#### Precautions, restrictions:

Avoid contact of herbicide with foliage, green shoots or stems, bark, exposed roots (including those emerging from plastic mulch), or fruit of crops because severe injury or destruction may result. When making pre-emergence and at-planting applications, applications must be made before crop emergence to avoid severe crop injury. When applying this product prior to transplanting or direct-seeding crops into plastic mulch, care must be taken to remove residues of this product, which could cause crop injury, from the plastic prior to planting. Residues can be removed by a single 0.5 inch application of water, either by natural rainfall or via a sprinkler system. Broadcast applications made at emergence will result in injury or death to emerged seedlings. Apply before seed germination in coarse sandy soils to further minimize the risk of injury. Unless otherwise specified on this product's labeling, treatments with selective equipment including wipers and hooded sprayers must be made at least 14 days prior to harvest. Post-harvest or fallow applications must be made at least 30 days prior to planting any non-labeled crop. See "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label for additional information.

In crops where spot treatments are allowed, do not treat more than 10% of the total field to be harvested. The crop receiving spray in treated area will be killed. Take care to avoid drift or spray outside the target area for the same reason.

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

# Cereal and Grain Crops

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

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

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

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

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

# Red Rice Control Prior to Planting Rice

<u>Use instructions:</u> Apply 1qt. of this product in 5 - 10 gallons of water per acre. Flush fields prior to application to obtain uniform germination and stand of red rice. Make application when the majority of red rice plants are in the 2-leaf stage and no more than 4 inches tall. Red rice plants with less than 2 true leaves may be only partially controlled.

<u>Precautions</u>, <u>restrictions</u>: Avoid spraying during low humidity conditions, as reduced control may result. DO NOT TREAT RICE FIELDS OR LEVEES WHEN THE FIELDS CONTAIN FLOODWATER. DO NOT RE-FLOOD TREATED FIELDS FOR 8 DAYS FOLLOWING APPLICATION.

# Spot Treatment (except rice)

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

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

# Wiper Applications (wheat and feed barley only)

<u>Use instructions</u>: Wiper applications may be used in wheat or feed barley. To control common rye or cereal rye, apply after the weeds have headed and achieved maximum growth, when the rye is at least 6 inches above the wheat crop.

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

# Pre-harvest (wheat and feed barley only)

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

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

<u>Precautions</u>, <u>restrictions</u>: Do not apply more than 22 fl. oz. of this product per acre. Allow 7 days between application and harvest or grazing. Do not apply to wheat or barley grown for seed, as a reduction in germination or vigor may occur.

# Post-harvest

<u>Use instructions:</u> This product may be applied after harvest of cereal crops. Higher rates may be required for control of large weeds that were growing in the crop at the time of harvest. Tank mixtures with 2,4-D or dicamba may be used.

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

#### South Dakota Only

For nonselective control of listed annual weeds in small grain cropping systems

<u>Use instructions:</u> For ground applications, use 3 - 5 gallons of water per acre. For aerial applications, use 2 - 3 gallons of water per acre.

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

California Only

Barnyardgrass control (Echinochloa crus-galli) in rice using renovation treatments Use instructions: This product may be applied as a renovation treatment in rice crops to control barnyardgrass infestations using ground broadcast spray or hand-held equipment. Renovation is defined as herbicide treatment that will produce crop and weed destruction in an entire field or contiguous area

treated within a field. Follow the application methods and specified treatment rates in this label.

Precautions, restrictions: The crop receiving spray in the treated area will be killed. Take care to avoid drift or spray outside target area for the same reason. The rice straw and stubble from the treated area, including a 25-foot buffer zone on all sides, shall not be used for grazing, animal bedding or any feed purposes.

No aerial applications are permitted for rice renovation.

Corn

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

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

For corn hybrids with Roundup Ready 2 Technology, see the "ROUNDUP READY CROPS" section of this label.

Pre-plant, Pre-emergence and At-planting

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

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

Tank Mixture Partners: Apply these tank mixtures in 10 - 20 gallons of water or 10 - 60 gallons of nitrogen solution per acre:

2.4-D Aim/Aim EC **ATRAZINE** AXIOM® BALANCE®/BALANCE PRO BANVEL® / CLARITY®

BICEP® MAGNUM® BICEP II MAGNUM BICEP LITE II MAGNUM

BULLET

CINCH/CINCH ATZ DEFINE

DEGREE™

DEGREE XTRA™ DISTINCT®

DUAL® MAGNUM® **DUAL II MAGNUM** 

**CHARGER MAX®** EPIC®

FRONTIER® / OUTLOOK®

**FULTIME™** 

GUARDSMAN® / LEADOFF® GUARDSMAN® MAX

HARNESS® HARNESS XTRA

HARNESS XTRA 5.6L HORNET

KEYSTONE KEYSTONE LA

LARIAT®

ALACHLOR

LINEX® / LOROX® MARKSMAN® Me-Too Lachlor II MICRO-TECH®

PROWL®

PYTHON®/PYTHON® II

**RADIUS** RESOLVE RESOUCE SHARK SIMAZINE

STALWART/STALWART C

STALWART XTRA

SURPASS®

**TOPNOTCH™** 

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

Annual weeds: For difficult-to-control weeds such as fall panicum, barnyardgrass, crabgrass, shattercane and broadleaf signalgrass up to 2 inches tall, and Pennsylvania smartweed up to 6 inches tall, apply this product at 22 fl. oz. per acre in these tank mixtures. For other labeled annual weeds, apply 16 - 22 fl. oz. of this product per acre when weeds are less than 6 inches tall, and 22 – 32 fl. oz. when weeds are over 6 inches tall. When using nitrogen solutions as the carrier, use rate may need to be increased for acceptable weed control.

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

For southern states, do not apply in nitrogen solutions to tough-to-control grasses such as barnyardgrass, fall panicum, broadleaf signalgrass, annual ryegrass and any perennial weeds. The area covered by this restriction includes from Route 50 South in Illinois and Indiana and the following states: Alabama, Arkansas, Delaware, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, New Jersey, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia and West Virginia.

# Hooded Sprayers

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

<u>Precautions, restrictions:</u> Corn must be at least 12 inches tall, measured without extending leaves. Contact of this product in any manner to any vegetation to which treatment is not intended may cause damage. Such damage shall be the sole responsibility of the applicator. Do not apply more than 22 fl. oz. of this product per acre for each application and no more than 64 fl. oz. per acre per year for hooded sprayer applications.

# **Spot Treatment**

Use instructions: For spot treatments, apply this product prior to silking of corn.

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

#### Pre-harvest

<u>Use instructions:</u> Make applications at 35% grain moisture or less. Ensure that maximum kernel fill is complete and the corn is physiologically mature (black layer formed). For ground applications, apply up to 64 fl. oz. of this product per acre.

<u>Precautions, restrictions:</u> Pre-harvest application is not suggested for corn grown for seed, as a reduction in germination or vigor may occur. Allow a minimum of 7 days between application and harvest.

#### Post-harvest

<u>Use instructions</u>: This product may be applied after harvest of corn. Higher rates may be required for control of large weeds which were growing in the crop at the time of harvest. Tank mixtures with 2,4-D or dicamba may be used.

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

#### Cotton

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

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

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

Use instructions: This product may be applied before, during or after planting cotton. Applications must be

made prior to emergence of the crop.

Tank Mixture Partners: This product may be tank-mixed with the products listed below. Ensure that the specific product being used is labeled for application prior to planting cotton. Read and follow label directions for all products used in the tank mixture. Apply these tank mixtures in 10 to 20 gallons of water per acre.

[Insert active ingredient(s) or brand name of product(s) containing the following active ingredients that, at the time of printing, are registered for use preplant, at-planting and/or pre-emergence to cotton:

2,4-D, clomazone, dicamba, diuron, fluometuron, metolachlor, s-metolachlor, pendimethalin, norflurazon, prometyrn, pyrithiobac-sodium.

Caparol, Clarity, Command, Cotoran, Cotton-Pro, Direx, Dual MAGNUM, Dual II MAGNUM, Karmex, Meturon, PARRLAY, Prowl, Prowl H20, Reflex, Staple, Stalwart, Zorial]

# Hooded Sprayer, Selective Equipment

<u>Use instructions</u>: This product may be applied through hooded sprayers, recirculating sprayers, shielded applicators or wiper applicators in cotton. Allow at least 7 days between application and harvest.

<u>Precautions, restrictions:</u> See the "SELECTIVE EQUIPMENT" part of the "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label for information on proper use and calibration of this equipment.

# **Spot Treatment**

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

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

#### Pre-harvest

<u>Use instructions:</u> This product provides weed control and cotton regrowth inhibition when applied prior to harvest of cotton. For weed control, apply at rates given in the annual, perennial and woody brush tables of this label. For cotton regrowth inhibition, apply 16 - 44 fl. oz. of this product per acre.

Up to 44 fl. oz. of this product may be applied using either aerial or ground spray equipment. Apply after sufficient bolls have developed to produce the desired yield of cotton. Applications made prior to this time could affect maximum yield potential.

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

<u>Precautions, restrictions:</u> Allow a minimum of 7 days between application and harvest of cotton. Preharvest application is not suggested for cotton grown for seed, as a reduction in germination or vigor may occur. THE USE OF ADDITIVES FOR PRE-HARVEST APPLICATION OF THIS PRODUCT TO COTTON IS PROHIBITED.

# **Fallow Systems**

Types of applications: Chemical fallow, pre-plant fallow beds, aid-to-tillage.

#### **Chemical Fallow**

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

Tank Mixture Partners: Tank mixtures with 2,4-D and dicamba may be used. Applications up to 44 fl. oz.

per acre may be made by aerial application in fallow sites where there is sufficient buffer to prevent injury due to drift onto adjacent crops.

<u>Precautions, restrictions:</u> For any crop not listed on this label, applications must be made at least 30 days prior to planting. DO NOT APPLY DICAMBA TANK MIXTURES BY AIR IN CALIFORNIA. Refer to specific product labels for crop rotation restrictions and precautionary statements of all products used in tank mixtures. Some crop injury may occur if dicamba is applied within 45 days of planting.

# **Pre-plant Fallow Beds**

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

In addition, 8 fl. oz. of this product plus 2 - 3 fl. oz. of Goal™ 2XL per acre will control the following weeds with the maximum height or length indicated: 3" – common cheeseweed, chickweed, groundsel; 6" – London rocket, shepherd's purse.

Use 11 fl. oz. of this product plus 2 - 3 fl. oz. of Goal 2XL per acre will control the following weeds with the maximum height or length indicated: 6" – common cheeseweed, groundsel, marestail (Conyza canadensis), 12" – chickweed, London rocket, shepherd's purse.

# Aid-to-Tillage

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

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

# Grain Sorghum (Milo)

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

#### Pre-plant, Pre-emergence, At-planting

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

Tank Mixture Partners: Apply these tank mixtures in 10 - 20 gallons of water or 10 - 60 gallons of nitrogen solution per acre:

ATRAZINE
ALACHLOR
BICEP II MAGNUM

BULLET

DUAL II MAGNUM LARIAT MICRO-TECH

LARIA

S-METOLACHLOR

INTRRO

For difficult to control annual weeds such as fall panicum barnyardgrass, crabgrass, shattercane and broadleaf signalgrass up to 2 inches tall, and Pennsylvania smartweed up to 6 inches tall, apply this product at 22 fl. oz. per acre in these tank mixtures. For other labeled annual weeds, apply 16 - 22 fl. oz. of this product per acre when weeds are less than 6 inches tall, and 22 - 32 fl. oz. when weeds are over 6 inches tall. When using nitrogen solutions as the carrier, the use rate may need to be increased for acceptable weed control.

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

Use instructions: This product may be applied as a spot treatment in grain sorghum. Make spot

treatments before heading of milo. This product may be applied with wiper applicators to control or suppress the weeds listed under "Wiper Applicators" in the "SELECTIVE EQUIPMENT" section of this label.

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

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

# **Hooded Sprayers**

<u>Use instructions:</u> This product may be used through hooded sprayers for weed control between the rows of milo. Only hooded sprayers that completely enclose the spray pattern may be used. See additional instruction for the use of hooded sprayers in the "SELECTIVE EQUIPMENT" section of this label.

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

<u>Precautions, restrictions:</u> Milo must be at least 12 inches tall, measured without extending leaves. Treat before milo sends tillers between the drill rows. If such tillers are contacted with the spray solution, the main plant may be killed. Contact of this product in any manner to any vegetation to which treatment is not intended may cause damage. Such damage shall be the sole responsibility of the applicator. Do not graze or feed milo forage or fodder following applications of this product through hooded sprayers. Do not apply more than 22 fl. oz. of this product per acre per application and no more than 64 fl. oz. per acre per year for hooded sprayer applications.

#### Pre-harvest

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

<u>Precautions, restrictions:</u> Do not apply more than 44 fl. oz. of this product per acre. As with other herbicides that cause sudden plant death, avoid pre-harvest applications of this product to milo infected with charcoal rot as lodging can occur. Allow a minimum of 7 days between application and harvest of sorghum. Pre-harvest application is not suggested for sorghum grown for seed, as a reduction in germination or vigor may occur. The use of this product for pre-harvest grain sorghum (milo) is not registered in California.

#### Post-harvest

<u>Use instructions:</u> This product may be applied after harvest of grain sorghum. Higher rates may be required for control of large weeds that were growing in the crop at the time of harvest.

Tank Mixture Partners: Tank mixtures with 2,4-D or dicamba may be used.

This product may be applied to grain sorghum (milo) stubble following harvest to suppress or control regrowth. Apply 22 fl. oz. of this product per acre for control, or 16 fl. oz. of this product per acre for suppression.

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

# **Herbs and Spices**

Labeled crops: Allspice, Angelica, Star anise, Annatto (seed), Balm, Basil, Borage, Burnet, Camomile, Caper buds, Caraway, Black caraway, Cardamom, Cassia bark, Cassia buds, Catnip, Celery seed, Chervil (dried), Chive, Chinese chive, Cinnamon, Clary, Clove buds, Coriander leaf (cilantro or Chinese parsley), Coriander seed (cilantro), Costmary, Culantro (leaf), Culantro (seed), Cumin, Curry (leaf), Dill (dillweed), Dill (seed), Epazote, Fennel seed (common and Florence), Fenugreek, White ginger

flower, Grains of paradise, Horehound, Hyssop, Juniper berry, Lavender, Lemongrass, Lovage (leaf and seed), Mace, Marigold, Marjoram (including oregano), Mexican oregano, Mioga flower, Mustard (seed), Nasturtium, Nutmeg, Parsley (dried), Pennyroyal, Pepper (black and white), Pepper leaves, Peppermint, Perilla, Poppy (seed), Rosemary, Rue, Saffron, Sage, Savory (summer and winter), Spearmint, Stevia leaves, Sweet bay, Tansy, Tarragon, Thyme, Vanilla, Wintergreen, Woodruff, Wormwood

**Types of application**: Those listed in "ANNUAL AND PERENNNIAL CROP" section, plus Wiper Application (Peppermint and Spearmint only), Spot Treatment (Peppermint and Spearmint Only)

<u>Precautions, restrictions:</u> This product could cause crop injury when applied prior to transplanting or direct-seeding crops into plastic mulch. Care must be taken to remove residual product from the plastic prior to planting. Residual product can be removed by a single 0.5 inch application of water, either by natural rainfall or by irrigation. Care should be taken to ensure that the wash water flushes off the plastic mulch and does not enter the transplant holes. Application made at crop emergence will result in injury or death to emerged seedlings.

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

<u>Use instructions</u>: This product may be applied as a spot treatment in peppermint and spearmint, or over the top of peppermint and spearmint with a wiper applicator. Apply spot treatments on a spray-to-wet basis using hand-held equipment, such as a backpack sprayer, pump-up pressure sprayer, a handgun, handwand or any other hand-held or motorized spray equipment used to direct the spray solution to a limited area. See additional instructions on the use of wiper applicators in the "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label.

<u>Precautions, restrictions:</u> Application may be repeated on the same area at 30-day intervals. Allow at least 7 days between application and harvest. For spot treatment application, do not treat more than 10 % of the total field area to be harvested. Crop sprayed in the treated area will be killed. Take care not to spray or allow spray to drift outside the target area in order to avoid unwanted crop destruction. For wiper application, droplets, mist, foam or splatter of the herbicide solution onto desirable vegetation may result in discoloration, stunting or destruction.

# Oil Seed Crops

Crop	LIMITATIONS
Oil Seed Crops: Borage, Buffalo gourd (seed), Canola, Crambe, Flax, Jojoba, Lesquerella, Meadowfoam, Mustard (seed), Rape, Safflower, Sesame, Sunflower	For Roundup Ready canola, refer to the Round Ready Crop section. Utilize the annual maximum use rate in the "PRODUCT INFORMATION" section except for the canola, safflower and sunflower which are provided in the table for this section. For pre-harvest (safflower and sunflower) and post-harvest applications:  • After treatment, allow a minimum of 7 days before harvest or livestock feeding.  • Do not plant any crop not listed on this label for at least 30 days after application.

**Types of applications:** Chemical fallow, pre-plant fallow beds, pre-plant, pre-emergence, at-planting, selective equipment in row middles (hooded or shielded sprayers, or wiper applicators), post-harvest treatments and pre-harvest (for safflower and sunflower only).

Crop	Maximum Applications Rates	Rate fl. oz./Acre
Canola	Combined total for all pre-emergence and shielded sprayer applications.	44
Safflower	Combined total for all pre-emergence and shielded sprayer applications.	64
	Pre-harvest application.	64
Sunflower	Combined total for all pre-emergence and shielded sprayer applications.	22
	Pre-harvest application.	22

24/77

**Pre-plant, At-planting, Pre-emergence:** Use this product before, during or after planting oil seed crops listed in this section. For canola, safflower and sunflower follow the maximum application rates listed in the table for this section.

Tank Mixture Partners: Apply with pendimethalin (Prowl) for sunflowers before, during or after planting into conventionally tilled soil, a cover crop, established sod or previous crop residue.

Selective Equipment: Apply this product using a wiper applicator or shielded sprayer in-between the rows once the crop is established. Refer to additional instructions on the use of wiper applicators and hooded sprayers in the "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label. For canola, safflower and sunflower follow the maximum application rates listed in the table for this section. Pre-harvest (Safflower and Sunflower Only): When applied to a physiologically mature crop of safflower and sunflower prior to harvest, this product provides weed control as a harvest aid. Apply a maximum of 64 fl. oz. of this product per acre for safflower when seed has lost its opaque character, approximately 20 - 30 days after the end of flowering of the secondary branches. Apply a maximum of 22 fl. oz. of this product per acre for sunflower when the backsides of sunflower heads are yellow and bracts are turning brown, and seed moisture content is less than 35 %.

Post –Harvest: Apply this product for weed control after harvest of oil seed crops. Use higher rates to control large weeds growing in the crop at the time of harvest.

Tank Mixture Partners: Apply with 2,4-D or dicamba.

# Soybeans

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

For Roundup Ready soybeans and Roundup Ready 2 Yield soybeans, see the "ROUNDUP READY CROPS" section of this label.

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

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

Tank Mixture Partners: Apply the following tank mixtures in 10 - 20 gallons of water per acre:

[Insert active ingredient(s) or brand name of product(s) containing the following active ingredients that, at the time of printing, are registered for use prep/ant, at-planting and/or pre emergence to soybeans:

2,4-D, alachlor, atrazine, carfentrazone-ethyl, chlorimuron ethyl, clomazone, cloransulam-methyl, dimethenamid, fenoxyprop, fluazifop-p-butyl, flufenacet, flumetsulam, flumiclorac pentyl ester, flumioxazin, fomesafen, imazaquin, imazethapyr, linuron, metolachlor, s-metolachlor, metribuzin, pendimethalin, sulfentrazone, tribenuron methyl, quizalofop P-ethyl.

A	IM	TM

ASSURE® II
AXIOM
AUTHORITY®
BLANKET
BOUNDARY™
CANOPY®
CANOPY EX®

COMMAND XTRA®

DOMAIN®

CLASSIC

DUAL MAGNUM DUAL II MAGNUM FIRSTRATE™

FLEXSTAR®

FRONTIER / OUTLOOK FUSION™ GAUNTLET™ GANGSTER INTRRO ME-TOO-LACHLOR

LEXONE

LOROX / LINURON

LOROX PLUS®

PROWL/PROWL H20 PURSUIT®

MICROTECH PURSUIT PLUS® PENDIMAX

PENDIMAX REFLEX® SCEPTER® SENCOR®

SENCOR®
PYTHON
RESOURCE
SQUADRON®
STEEL®
TREFLAN

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

Annual weeds: For difficult-to-control weeds such as fall panicum, barnyardgrass, crabgrass, shattercane and broadleaf signalgrass up to 2 inches tall, and Pennsylvania smartweed up to 6 inches tall, apply this product at 22 fl. oz. per acre in these tank mixtures. For other labeled annual weeds, apply 16 - 22 fl. oz. of this product per acre when weeds are less than 6 inches tall, and 22 - 32 fl. oz. when weeds are over 6 inches tall.

<u>Precautions</u>: Check to make sure that tank-mix partner is registered in the state. 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.

# **Spot Treatment**

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

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

#### Pre-harvest

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

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

<u>Precautions</u>. Do not apply more than 3.3 qts. per acre of this product for pre-harvest applications. Do not apply more than 44 fl. oz. per acre of this product by air. Allow a minimum of 7 days between application and harvest of soybeans. Do not graze or harvest treated hay or fodder for livestock feed within 25 days of last pre-harvest application. (If the application rate is 22 fl. oz. per acre or lower, the grazing restriction is reduced to 14 days after last pre-harvest application.) Pre-harvest application is not suggested for soybeans grown for seed as a reduction in germination or vigor may occur.

# Selective Equipment

<u>Use instructions:</u> This product may be applied through recirculating sprayers, shielded applicators, hooded sprayers, wiper applicators or sponge bars in soybeans. Allow at least 7 days between application and harvest.

<u>Precautions</u>, <u>restrictions</u>: See the "SELECTIVE EQUIPMENT" part of the "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label for information on proper use and calibration of this equipment.

# Sugarcane

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

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

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

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

# **Spot Treatment**

<u>Use instructions:</u> This product may be applied as a spot treatment in sugarcane. For control of volunteer or diseased sugarcane, make a 1% solution of this product in water and spray to wet foliage of vegetation

to be controlled. Volunteer or diseased sugarcane must have at least 7 new leaves.

<u>Precautions</u>, <u>restrictions</u>: Avoid spray contact with healthy cane plants since severe damage or destruction may result. Do not feed or graze treated sugarcane foliage following application.

# **Fallow Treatments**

<u>Use instructions:</u> This product may be used as a replacement for tillage in fields that are lying fallow between sugarcane crops. This product may also be used to remove the last stubble of ratoon cane. For removal of last stubble of ratoon cane, apply 2.5 - 3.3 qts. of this product in 10 - 40 gallons of water per acre to new growth having at least 7 new leaves. Allow 7 or more days after application before tillage. Ground or aerial application equipment may be used. Applications up to 64 fl. oz. per acre may be made by aerial application in fallow sites where there is sufficient buffer to prevent injury due to drift onto adjacent crops.

Tank Mixture Partners: Tank mixtures with 2,4-D and dicamba may be used.

# **Hooded Sprayers**

<u>Use instructions:</u> This product may be used through hooded sprayers for weed control between rows of sugarcane. See the "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label for additional use instructions.

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

Sugarcane Ripening

<u>Use instructions</u>: This product is a foliar-applied plant growth regulator to hasten ripening and increase the level of sucrose in sugarcane. It is effective in both low-and high- tonnage sugarcane. When applied as directed and under the conditions, described, this product will hasten ripening and extend the period of high sucrose level in sugarcane. As a result of leaf desiccation, improved trash burn can be expected. Most of the sucrose increase is concentrated in the top nodes of the treated cane stalk. To maximize sugar recovery where topping is practiced at harvest, top at the base of the fourth leaf. Prior to application, consult your state sugarcane authority regarding the degree of sucrose response anticipated from the variety of sugarcane to be treated. Do not plant subsequent crops in treated fields within 30 days after application other than the following: alfalfa or other forage legumes, beans (all types), corn (all types), cotton, melons (all types), pasture grasses, peanuts, potatoes (Irish or sweet), sorghum (milo), soybeans, squash (all types) or wheat.

<u>Precautions, restrictions:</u> Application of this product may initiate development of shooting eyes. This product may not increase the sucrose content of sugarcane under conditions of good natural ripening. Within 2 to 3 weeks after application, this product may produce a slight yellowing to a pronounced browning and drying of leaves, and a shortening of upper internodes. Spindle death may occur.

Rainfall within 6 hours after application may reduce effectiveness.

Application is not suggested for sugarcane grown for seed, as a reduction in germination or vigor may occur.

Do not feed or graze treated sugarcane forage following application.

Do not apply for enhanced ripening to any crops other than sugarcane. 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.

#### APPLICATION RATES:

Use the following application rates and timing instructions according to the State in which the sugarcane is grown.

NOTE: Use the higher rate within the given range when treating sugarcane under adverse ripening conditions or when less responsive varieties are to be treated.

FLORIDA: Apply 5 - 12 fl. oz. of this product per acre 3 - 5 weeks before harvest of LAST RATOON CANE ONLY.

HAWAII: Apply 9 - 21 fl. oz. of this product per acre 4 - 10 weeks before harvest.

LOUISIANA: Apply 4 - 12 fl. oz. of this product per acre 3 - 7 weeks before harvest of RATOON CANE ONLY.

PUERTO RICO: Apply 5 fl. oz. of this product per acre 3 - 5 weeks before harvest of RATOON CANE ONLY.

TEXAS: Apply 5 - 12 fl. oz. of this product per acre 3 - 5 weeks before harvest of RATOON CANE ONLY.

# **Vegetable Crops**

NOTE: THIS "VEGETABLE CROPS" SECTION GIVES GENERAL DIRECTIONSTHAT APPLY TO ALL VEGETABLE CROPS LISTED ALPHABETICALLY IN THE SECTIONS THAT FOLLOW. SEE THE INDIVIDUAL CROP SECTIONS FOR SPECIFIC USE INSTRUCTIONS, PRE-HARVEST INTERVALS, PRECAUTIONS AND RESTRICTIONS.

Types of applications: Chemical Fallow, Preplant Fallow Beds, Preplant, At-Planting, Preemergence, Prior to Transplanting Vegetables, Hooded Sprayer in Row Middles, Shielded Sprayer in Row Middles, Wiper Application in Row Middles, Post-Harvest, Directed Application (Non-Bearing Ginseng), Wiper Application (Rutabagas Only).

<u>Precautions, restrictions:</u> This product could cause crop injury when applied prior to transplanting or direct-seeding crops into plastic mulch. Care must be taken to remove residual product from the plastic prior to planting. Residual product can be removed by a single 0.5 inch application of water, either by natural rainfall or by irrigation. Care should be taken to ensure that the washwater flushes off the plastic mulch and does not enter the transplant holes. Application of this product at crop emergence will result in injury or death to emerged seedlings.

Avoid contact of this herbicide with foliage, green shoots or stems, bark, exposed roots (including those emerging from plastic mulch), or fruit of crops, as severe crop injury or destruction may result. When making a preemergence or at-planting application, application must be made before crop emergence to avoid severe crop injury. Apply before seed germination in coarse sandy soils to further minimize the risk of crop injury. In crops with vines, hooded sprayer, shielded sprayer and wiper application to row middles should be made prior to vine development, otherwise severe crop injury or destruction may result. Unless otherwise specified in this label, treatment with selective equipment, including wiper applicators and hooded sprayers, must be made at least 14 days prior to harvest. Post-harvest or fallow application must be made at least 30 days prior to planting any crop not listed on this label. See additional use instructions in the "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label.

**Brassica Vegetables** 

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

**Bulb Vegetables** 

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

**Cucurbit Vegetables and Fruits** 

LABELED CROPS: Chayote (fruit), Chinese waxgourd (Chinese preserving melon), Citron melon,

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

<u>Precautions, restrictions</u>: For Cantaloupe, Casaba melon, Crenshaw melon, Cucumber, Gherkin, Gourds, Honeydew melon, Honey ball melon, Mango melon, Melons (all), Muskmelon, Persian melon, Pumpkin, Squash (summer, winter), and Watermelon, allow at least 3 days between application and planting.

**Leafy Vegetables** 

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

<u>Precautions</u>, <u>restrictions</u>: For Watercress, avoid applications within 3 days prior to seeding, and during the period between seeding and emergence to minimize the risk of crop injury.

Fruiting Vegetables

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

<u>Precautions</u>, <u>restrictions</u>: For eggplant, ground cherry, pepper (all), and tomatillo, allow at least 3 days between application and planting. For tomato and tomatillo grown on sandy soil, do not make hooded or shielded sprayer applications in row middles because of the potential for crop injury.

Legume Vegetables (Succulent or Dried)

LABELED CROPS: Bean (*Lupinus*: includes grain lupin, sweet lupin, white lupin, and white sweet lupin), Bean (*Phaseolus*: includes field bean, kidney bean, lima bean, navy bean, pinto bean, runner bean, snap bean, tepary bean, wax bean), Bean (*Vigna*: includes adzuki bean, asparagus bean, blackeyed pea, catjang, Chinese longbean, cowpea, crowder pea, moth bean, mung bean, rice bean, southern pea, urd bean, yardlong bean), Broad bean (fava), Chickpea (garbanzo), Guar, Jackbean, Lablab bean, Lentil, Pea (*Pisum*: includes dwarf pea, edible-podded pea, English pea, field pea, garden pea, green pea, snowpea, sugar snap pea), Pigeon pea, Soybean (immature seed), Sword bean

**Types of applications**: Those listed in the "ANNUAL AND PERENNNIAL CROP" section, plus Preharvest (Dry Beans, Peas, Lentils and Chickpeas Only) and Spot Treatment (Dry Beans, Peas, Lentils and Chickpeas Only).

Spot Treatment (Dry Beans, Peas, Lentils and Chickpeas Only)

<u>Use instructions</u>: This product may be applied as a spot treatment to control troublesome weeds such as Canada thistle, quackgrass, mayweed (dog fennel), and milkweed in dry beans, peas, lentils and chickpeas, Apply up to 22 fl. oz. of this product per acre in dry beans, or up to 64 fl. oz. per acre in dry peas, lentils and chickpeas, in 10 to 20 gallons of water using ground spray equipment, or use a 2 % solution in a hand-held sprayer. For best results, application should be made at or beyond the bud stage of growth.

<u>Precautions, restrictions</u>: Apply at least 7 days before harvest. Only one application may be made per year. Do not combine spot treatment with a pre harvest broadcast spray on the same crop area. Observe at least a 30 day plant-back interval between treatment and replanting of any crop not listed on this label. Do not feed treated vines and hay to livestock. Do not treat cowpeas or field (feed) peas, since these crops are considered to be grown as livestock feed.

Crop sprayed in the treated area will be killed. Take care not to spray or allow spray to drift outside target area in order to avoid unwanted crop destruction.

Pre-harvest (Dry Beans, Peas, Lentils and Chickpeas Only)

<u>Use instructions</u>: This product may be applied over the top of dry beans, peas, lentils and chickpeas prior to harvest. Apply up to 22 fl. oz. of this product per acre in dry beans, or up to 64 fl. oz. per acre in dry peas, lentils and chickpeas, in 3 - 20 gallons of water per acre at the hard dough stage of the legume seed (30 % grain moisture or less).

<u>Precautions</u>. Apply at least 7 days before harvest. Only one pre-harvest application may be made per year. Do not combine a pre-harvest spray with spot treatment on the same crop area. Observe at least a 30 day plant-back interval between treatment and replanting of any crop not listed on this label. Do not feed treated vines and hay to livestock. Pre-harvest application is not suggested for legumes grown for seed, as a reduction in germination or vigor may occur. Do not treat cowpeas or field (feed) peas, since these crops are considered to be grown as livestock feed.

**Root and Tuber Vegetables** 

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

Directed Application (Non-Bearing Ginseng Only).

<u>Use instructions</u>: This product may be applied for weed control in established nonbearing ginseng. Application may be made with boom equipment, CDA, a shielded sprayer, a handheld and backpack wand, lance, and orchard gun, or with a wiper applicator. See additional use instructions in the "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label.

<u>Precautions</u>, <u>restrictions</u>: Application must be made at least one year prior to harvest. Control the application so as not to allow any contact of this product with the ginseng plant.

Wiper Application (Rutabagas Only)

<u>Use instructions</u>: A wiper applicator may be used over the top of rutabagas for the control of tall weeds. See additional use instructions for wiper applicators in the "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label.

<u>Precautions</u>, <u>restrictions</u>: Allow at least 14 days between application and harvest of rutabagas. Droplets, mist, foam or splatter of the herbicide solution settling onto desirable vegetation may result in discoloration, stunting or destruction.

#### Miscellaneous Crops

LABELED CROPS: Aloe vera, Asparagus, Bamboo shoots, Globe artichoke, Okra, Peanut (ground nut), Pineapple, Strawberry, Sugar beet.

**Types of application:** Those listed in the "ANNUAL AND PERENNNIAL CROP" section, plus Weed Control, Site Preparation, Spot Treatment (asparagus), Post-Harvest (asparagus).

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

<u>Precautions</u>, <u>restrictions</u>: Avoid contact of this product with foliage, green shoots or stems, bark, exposed roots (including those emerging from plastic mulch), or fruit of crops, as severe crop injury or destruction may result. When making pre-emergence and at-planting applications, application must be

made before crop emergence to avoid severe crop injury. Apply before seed germination in coarse sandy soils to further minimize the risk of crop injury. In crops with vines, hooded sprayer, shielded sprayer and wiper application to row middles should be made prior to vine development, otherwise severe crop injury or destruction may result. Unless otherwise specified in this product's labeling, treatment with selective equipment, including wiper applicators and hooded sprayers, must be made at least 14 days prior to harvest. Post-harvest or fallow application must be made at least 30 days prior to planting any crop not listed on this label. See additional information in the "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label.

# Weed Control, Site Preparation

<u>Use instructions</u>: This product may be applied for weed control, or for site preparation prior to planting or transplanting crops listed in this section.

<u>Precautions, restrictions</u>: This product could cause crop injury when applied prior to transplanting or direct-seeding crops into plastic mulch. Care must be taken to remove residues of this product from the plastic prior to planting. Residual product can be removed by a single 0.5 inch application of water, either by natural rainfall or by irrigation. Care should be taken to ensure that the wash water flushes off the plastic mulch and does not enter transplant holes. Allow at least 21 days between residue removal and transplanting. Application of this product at crop emergence will result in injury or death to emerged seedlings.

Do not apply within a week before the first asparagus spears emerge. Do not feed or graze treated pineapple forage following application.

# Spot Treatment (Asparagus)

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

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

#### Post-Harvest (Asparagus)

<u>Use instructions</u>: This product may be applied for weed control after the last harvest and all spears have been removed. If spears are allowed to re-grow, delay application until ferns have developed. Delayed treatment should be made as a directed or shielded spray in order to avoid contact of the spray with ferns, stems or spears. 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. See additional use instructions in the

#### TREE, VINE AND SHRUB CROPS (Alphabetical)

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

**Types of applications:** Pre-plant (site preparation) broadcast sprays, weed control, middles (between rows of trees, vines or bushes), strips (within rows of trees, vines or bushes), selective equipment such as shielded sprayers and wiper treatments, perennial grass suppression, directed sprays, spot treatments, cut stump.

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

<u>Use instructions</u>: This product may be applied in middles, strips or for weed control in established citrus groves, tree fruit and tree nut groves, orchards, berries and vineyards. It may also be used for site preparation prior to planting or transplanting of these crops. Apply 11 fl. oz. - 3.3 gts. per acre according

to the "ANNUAL WEEDS RATE TABLE" and "PERENNIAL WEEDS RATE TABLE" sections of this label. Utilize rates at the higher end of the specified rate range when weeds are stressed, growing in dense populations or are greater than 12 inches tall. Repeat applications may be made up to a maximum of 7 qts. per acre per year.

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

Precautions, restrictions: Extreme care must be exercised to avoid contact of herbicide solution, spray, drift or mist with foliage or green bark of trunk, branches, suckers, fruit or other parts of trees, canes and vines. Avoid applications when recent pruning wounds or other mechanical injury has occurred. Contact of this product with other than matured brown bark can result in serious crop damage or destruction. Only shielded or directed sprayers may be used in crops with potential for crop contact, and then only where there is sufficient clearance. For applications in strips (within rows of trees), only selective equipment (directed sprays, hooded sprayers, shielded applicators, or wipers) must be used to minimize the potential for leakage or drift of herbicide sprays onto crops. For berry crops, hooded or shielded sprayers must be fully enclosed including top, sides, front and back. Only wiper or shielded applicators capable of preventing all contact with crop may be used. See "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label for additional directions and precautions.

Allow a minimum of 3 days between application and transplanting.

#### Middles (between rows)

<u>Use instructions:</u> This product will control or suppress annual and perennial weeds and ground covers growing between the rows of labeled tree and vine crops. If weeds are under drought stress, irrigate prior to application. Reduced control may result if weeds have been moved prior to application.

Tank Mixture Partners: A tank mixture of this product plus Goal 2XL may be used for annual weeds in middles between rows of citrus crops, tree fruits, tree nuts and vine crops. This mixture is suggested when weeds are stressed or growing in dense populations. 11 - 22 fl. oz. of this product per acre plus 3 - 12 fl. oz. of Goal 2XL per acre will control annual weeds with a maximum height or diameter of 6 inches, including crabgrass, common groundsel, junglerice, common lambsquarters, redroot pigweed, London rocket, common ryegrass, shepherd's purse, annual sowthistle, filaree (suppression), horseweed/marestail (*Conyza canadensis*), stinging nettle and common purslane (suppression). 11 - 22 fl. oz. of this product plus 3 - 12 fl. oz. of Goal 2XL per acre will control common cheeseweed (malva) or hairy fleabane (*Conyza bonariensis*) with a maximum height or diameter of 3 inches.

This product may also be applied to row middles in tank mixtures with the following products:

[Insert active ingredient(s) or brand name of product(s) containing the following active ingredients that, at the time of printing, are registered for use in middles (in-between rows) of tree, vine and shrub crops:

bromacil, diuron, napropamide, norflurazon, oryzalin, oxyfluorfen, pendimethalin, simazine.

Devrinol 50-DF, Direx 4L, Goal 2XL, Karmex DF, Karmex II DF, Prowl, Princep Caliber 90, Simazine 4L, Simazine 80*W*, Sim-Trol 4L, Solicam DF, Surflan AS, Surflan 75W]

#### Strips (in rows)

Use instructions: This product may be applied in rows of tree or vine crops.

Tank Mixture Partners: This product may also be tank mixed with the following products:

[Insert active ingredient(s) or brand name of product(s) containing the following active ingredients that, at the time of printing, are registered for use in strips(in rows) of tree, vine and shrub crops:

bromacil, diuron, napropamide, norflurazon, oryzalin, oxyfluorfen, pendimethalin, simazine.

Devrinol 50-DF, Direx 4L, Goal 2XL, Karmex DF, Karmex II DF, Prowl, Princep Caliber 90, Simazine 4L, Simazine 80W, Sim-Trol 4L, Solicam DF, Surflan AS, Surflan 75W]

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

# **Perennial Grass Suppression**

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

For suppression of tall fescue, fine fescue, orchardgrass and quackgrass, apply 4 fl. oz. of this product in 10 - 20 gallons of water per acre.

For suppression of Kentucky bluegrass covers, apply 4 fl. oz. of this product per acre. Do not add ammonium sulfate.

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

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

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

For burndown of bermudagrass, apply 22 - 44 fl. oz. of this product in 3 - 20 gallons of water per acre. Use this treatment only if reduction of the bermudagrass stand can be tolerated. When burndown is required prior to harvest, allow at least 21 days to ensure sufficient time for burndown to occur.

For suppression of bermudagrass, apply 4 - 11 fl. oz. of this product per acre east of the Rocky Mountains and 11 fl. oz. of this product to the west of the Rocky Mountains. Apply in a total spray volume of 3 - 20 gallons per acre, no sooner than 1 - 2 weeks after full green-up. If the bermudagrass is mowed prior to application, maintain a minimum of 3 inches in height. Sequential applications may be made when regrowth occurs and bermudagrass injury and stand reduction can be tolerated. East of the Rocky Mountains, rates of 4-7 fl. oz. per acre must be used in shaded conditions or where lesser degree of suppression is desired.

#### Cut Stump (tree crops)

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

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

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

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

Apply this product using suitable equipment to ensure coverage of the entire cambium. Cut trees or resprouts close to the soil surface. Apply a 50 - 100% solution of this product to the freshly cut surface immediately after cutting. Delays in application may result in reduced performance. For best results,

applications must be made during periods of active growth and full leaf expansion.

<u>Precautions, restrictions:</u> DO NOT MAKE CUT STUMP APPLICATIONS WHEN THE ROOTS OF ADJACENT DESIRABLE TREES MAY BE GRAFTED TO THE ROOTS OF THE CUT STUMP. INJURY RESULTING FROM ROOT GRAFTING MAY OCCUR IN ADJACENT TREES. Some sprouts, stems, or trees may share the same root system. Adjacent trees having a similar age, height and spacing may signal shared roots. Whether grafted or shared, injury is likely to occur to non-treated stems / trees when one or more trees sharing common roots are treated.

# **Berry Crops**

Labeled crops: Blackberry (including bingleberry, black satin berry, boysenberry, Cherokee blackberry, chesterberry, Cheyenne blackberry, coryberry, darrowberry, dewberry, Dirksen thornless berry, Himalayaberry, hullberry, juneberry, lavacaberry, lowberry, lucretiaberry, marion berry, nectarberry, olallieberry, Oregon evergreen berry, phenomenal berry, rangeberry, ravenberry, rossberry, Shawnee blackberry, and youngberry), blueberry, boysenberry, cranberry, currant, dewberry, elderberry, gooseberry, huckleberry, loganberry, olallieberry, raspberry (black, red), youngberry.

<u>Precautions</u>, <u>restrictions</u>: To avoid damage, herbicide sprays must not be allowed to contact desirable vegetation, including green shoots, canes or foliage. Allow a minimum of 30 days between last application and harvest of cranberries. Allow a minimum of 14 days between last application and harvest of other berry crops. Do not make directed sprays within cranberry bush areas prior to berry harvest.

# **Spot Treatment in Cranberry Production**

<u>Use instructions</u>: Spot treatments may be used to control weeds growing in dry ditches (interior and perimeter) of cranberry production areas. Hand-held sprayer or other appropriate application equipment listed under "APPLICATION EQUIPMENT AND TECHNIQUES" in this label may be used. Drop water level to remove standing water in ditches prior to application. In hand-held sprayers, use 1 - 1.5% solution of this product. Spray to wet vegetation, not to run-off.

<u>Precautions</u>. For treatments after draw down of water in dry ditches, allow 2 or more days after treatment before reintroduction of water to achieve maximum weed control. Apply this product within 1 day after draw down to ensure application to actively growing weeds. Allow a minimum of 30 days between last application and harvest of cranberries. Do not apply this material through the irrigation system. Do not make applications by air. Do not apply directly to water. Use nozzles that emit medium to large-sized droplets to minimize drift in order to avoid crop injury.

# Post-harvest Treatments in Cranberry Production

<u>Use instructions</u>: Application of this product may be made after the harvest of cranberries to control weeds growing within the field. Best results will be obtained if applications are made to vines that appear dormant (after they have turned red). Hand-held sprayers, wipers, or other appropriate application equipment listed under "APPLICATION EQUIPMENT AND TECHNIQUES" in this label may be used. If using hand-held sprayers, use a 0.4 – 0.7% solution of this product. Spray to wet vegetation, not to runoff. If using hand-held boom sprayers, apply 44 – 86 fl. oz. of this product per acre.

<u>Precautions</u>, <u>restrictions</u>: Make applications only after cranberries have been harvested. Do not treat more than 10% of the total bog. Allow a minimum of 6 months after last application and next harvest of cranberries. Do not apply this product through the irrigation system. Do not make applications by air. Do not apply directly to water. Even though vines appear dormant, contact of the herbicide solution with desirable vegetation may result in damage or severe plant injury. Cranberry plants that are directly sprayed may be killed.

#### Raspberry Crops

TYPES OF APPLICATION: Preplant (Site Preparation) Broadcast Sprays, General Weed ContrOl, Middles (between rows of bushes), Strips (within rows of bushes), Selective Equipment (shielded sprayer, wiper applicator), Directed Spray, Spot Treatment, Perennial Grass Suppression, Cut Stump. Application may be made with boom equipment, CDA equipment, a shielded sprayer, a hand-held and backpack wand, lance, orchard gun or with wiper applicator equipment, except as directed.

<u>Use instructions</u>: Apply 11 fl. oz. to 3.3 qts. of this product per acre according to the "ANNUAL WEEDS RATE SECTION" and "PERENNIAL WEEDS RATE SECTION" of this label. Utilize rates at the higher end of the application rate range when weeds are stressed, growing in dense populations or are greater than 12 inches tall. Repeat applications may be made up to a maximum of 7 qts. per acre per year.

<u>Precautions, restrictions</u>: To avoid damage, herbicide sprays must not be allowed to contact desirable vegetation, including green shoots and foliage. Allow a minimum of 14 days between last application and harvest.

Allow a minimum of 3 days between application and transplanting.

# Citrus Crops

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

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

For goatweed, apply 44 - 64 fl. oz. of this product per acre. Apply in 20 - 30 gallons of water per acre when plants are actively growing. Use 44 fl. oz. per acre when plants are less than 8 inches tall and 64 fl. oz. when plants are greater than 8 inches tall. If goatweed is greater than 8 inches tall, the addition of Krovar® I or Karmex® may improve control. Refer to the individual product labels for specific crops, rates, geographic restrictions and precautionary statements.

#### **Perennial Weeds**

S = Suppression B = Burndown PC = Partial Control C = Control

Weed Species		Glyfine™ K Plus Herbicide per Acre			
		0.7 qt.	1.3 qts.	2 qts.	3.3 qts.
Bermudagrass		В	-	PC	С
Guineagrass	Texas & Florida Ridge	В	С	С	С
	Florida Flatwoods	-	В	С	С
Paragrass		В	С	С	С
Torpedograss		S	-	PC	С

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

# **Christmas Trees and Other Non-Food Tree Crops**

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

#### Directed Spray, Spot Treatment, Wipers

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

<u>Precautions, restrictions:</u> Care must be exercised to avoid contact of spray, drift or mist with foliage or green bark of established Christmas trees and other pine trees. Desirable plants may be protected from the spray solution by using shields or coverings made of cardboard or other impermeable material. UNLESS OTHERWISE DIRECTED, DO NOT USE THIS PRODUCT AS AN OVER-THE-TOP

35/77

# BROADCAST SPRAY IN CHRISTMAS TREES AND OTHER PINE TREES.

# **Site Preparation**

Use instructions: This product may be used prior to planting Christmas trees.

<u>Precautions</u>, <u>restrictions</u>: Precautions must be taken to protect non-target plants during site preparation applications.

#### **Christmas Tree Plantations**

NOTE: IF IMPROPERLY APPLIED, THIS PRODUCT HAS THE POTENTIAL TO CAUSE SEVERE CHRISTMAS TREE INJURY. FOLLOW ALL LABEL DIRECTIONS.

This product may be applied as a broadcast spray over established Christmas trees. Ensure that adequate buffers are maintained to prevent drift onto nearby desirable crops or vegetation. Read the entire "APPLICATION EQUIPMENT AND TECHNIQUES" section of the label booklet for additional application precautions.

This application is approved for the following Christmas tree species:

Douglas fir (Pseudotsuga menziesii) Fir species (Abies spp.) Spruce species (Picea spp.)

Application may be made only after trees have completed at least a full growing season since planting or transplanting.

Do not apply this product 1 full year prior to tree harvest.

Application may only be made in the fall after the formation of final conifer resting buds. Final resting buds must be fully hardened and in the dormant stage. Application made at any other time may result in unacceptable Christmas tree injury.

Avoid spray pattern overlap, as injury may occur.

Apply 22 fl. oz. of this product per acre in 5 to 30 gallons of water per acre.

NOTE: DO NOT ADD SURFACTANTS, ADDITIVES CONTAINING SURFACTANTS, OR ANY OTHER ADDITIVES TO THIS PRODUCT AS SEVERE CHRISTMAS TREE INJURY MAY RESULT.

This product may be used at rates from 22 - 44 fl. oz. per acre. Consult your local retailer, distributor or state extension service for specific use instructions if you require rates greater than 22 fl. oz. per acre.

Drift control additives may increase Christmas tree injury and their use is not recommended.

The use of other herbicides tank mixed with this product is not recommended as severe Christmas tree injury may result.

# Miscellaneous Tree Food Crops

Labeled crops: Cactus (fruit and pads), Palm (heart, leaves), Palm (oil)

Types of applications: Those listed in the "TREE, VINE AND SHRUB CROPS section.

#### **Pome Fruit**

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

Precautions, restrictions: Allow a minimum of 1 day between last application and harvest in pome crops.

#### Stone Fruit

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

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

# **Restrictions on Application Equipment**

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

Any application equipment listed in this section may be used in apricots, nectarines, peaches and plums/prunes growing in Arizona, California, Colorado, Idaho, Kansas, Kentucky, New Jersey, North Dakota, Oklahoma, Oregon, Texas, Utah and Washington, except for peaches grown in the states specified in the following paragraph. In all other states use wiper equipment only.

For peaches grown in Alabama, Arkansas, Florida, Georgia, Louisiana, Mississippi, North Carolina, South Carolina and Tennessee only, apply with a shielded boom sprayer or shielded wiper applicator, which prevents any contact of this product with the foliage or bark of trees. Apply no later than 90 days after first bloom. Applications made after this time may result in severe damage. Remove suckers and low-hanging limbs at least 10 days prior to application. Avoid applications near trees with recent pruning wounds or other mechanical injury. Apply only near trees that have been planted in the orchard for 2 or more years. EXTREME CARE MUST BE TAKEN TO ENSURE NO PART OF THE PEACH TREE IS CONTACTED.

#### **Tree Nuts**

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

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

# Tropical and Subtropical Trees and Fruit

Labeled crops: Ambarella, Atemoya, Avocado, Banana, Barbados cherry (acerola), Biriba, Blimbe, Breadfruit, Cacao (cocoa) bean, Canistel, Carambola (starfruit), Cherimoya, Coffee, Custard apple, Dates, Durian, Feijoa, Figs, Governor's plum, Guava; llama, Imbe, Imbu, Jaboticaba, Jackfruit, Longan, Lychee, Mamey apple, Mango, Mangosteen, Marmaladebcix (genip), Mountain papaya, Noni (Indian Mulberry), Papaya, Pawpaw, Plantain, Persimmon, Pomegranate, Pulasan, Rambutan, Rose apple, Sapodilla, Sapote (black, mamey, white), Spanish lime, Soursop, Star apple, Sugar apple, Surinam cherry, Tamarind, Tea, Ti (roots and leaves), Wax jambu.

Types of applications: Those listed in the "TREE, VINE AND SHRUB CROPS section and as described the Bananacide(banana only) section.

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

Bananacide (banana only)

<u>Use instructions</u>: This product may be used to destroy banana plants infected with the Banana Bunchy Top Virus as well as non-infected banana plants to establish disease free buffers around plantations. Remove all fruit from the plants within the treatment area prior to treatment. Inject 0.04 fl. oz. (1 mL) of this product's concentrate per 2 - 3 inches of pseudostem diameter. Make the injection at least one foot above the ground, except for very small plants, which must be injected vertically into the top. Any subsequent regrowth must also be destroyed. All plants and mats (or units) adjacent (within a 4 foot radius) to a treated mat shall be mechanically destroyed.

For control of the banana bunchy top virus, it is critical that the grower follow a strict control program involving monitoring for diseased plants, spraying to control the aphid vector, and destruction of all infected mats (or units). An infected plant may not show symptoms of the banana bunchy top virus for up to 125 days; therefore, it is critical that the entire mat (or unit) containing the diseased plant be destroyed immediately.

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

#### Vine Crops

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

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

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

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

## PASTURE GRASSES, FORAGE LEGUMES AND RANGELANDS

# Alfalfa, Clover, and Other Forage Legumes

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

**Types of applications:** Dormant (alfalfa only), pre-plant, pre-emergence, at-planting, spot treatment, wiper applications, renovation, pre-harvest (except kenaf and leucaena), stand removal.

#### Dormant (alfalfa only)

<u>Use instructions</u>: This product will control or suppress many weeds including quackgrass, downy brome, and cheatgrass in domant alfalfa. Apply 6 - 8 fl. oz. per acre of this product. Apply in spring to alfalfa that is dormant. Applications must be made after spring temperatures have warmed enough to encourage resumption of weed growth, but prior to initiation of trifoliate leaf expansion of the alfalfa. Applications made after expansion of the first trifoliate leaf of the alfalfa will cause growth reduction and reduced crop yield.

<u>Precautions</u>. Do not use ammonium sulfate when spraying dormant alfalfa with this product. Do not use this product where a slight yield reduction in the first cutting of alfalfa cannot be tolerated. Do not make more than one application per year. Allow 36 hours after application before grazing livestock or harvesting. Slight discoloration of the alfalfa may occur, but the alfalfa will regreen and regrow under moist soil conditions as effects of this product wear off. Application of this product can cause crop injury. Any such crop injury is the responsibility of the applicator.

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

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

Precautions, restrictions: Remove domestic livestock before application.

# Spot Treatment or Wiper Applications Over-the-top

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

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

# Pre-harvest (except Kenaf and Leucaena), Stand Removal

Use instructions: This product may be applied as a broadcast application prior to harvest (except in kenaf and leucaena) in declining stands or in any stand where severe crop injury or destruction is acceptable, or to remove established stands of any forage legumes listed in this section. Application may be made at any time of the year to control annual and perennial weeds, including quackgrass. For control of quackgrass, apply in the spring, late summer or fall when quackgrass is actively growing. Treatment for quackgrass must be followed by deep tillage for complete control. If the crop is to be harvested or grazed by livestock, use up to a maximum of 44 fl. oz. per acre in alfalfa and up to 32 fl. oz. per acre in all other legumes listed on this label. For complete removal of established stands of clover, it may be necessary to use a higher application rate, as listed in the 'PERENNIAL WEEDS RATE SECTION" of this label.

Precautions, restrictions: This application may destroy an alfalfa stand, and may severely injure or destroy other labeled crops such as clover. Remove domestic livestock before application. Make only one application to an existing crop stand per year. The treated crop and weeds can be harvested and fed to livestock according to the application rates and intervals defined below.

Crop	Maximum Single Pre-harvest Application Rate (per acre)	Minimum Interval Between Application and Harvest or livestock Grazing
alfalfa	44 fl. oz.	36 hours
Other legumes listed	32 fl. oz.	3 days

For application rates higher than those listed here, do not harvest for livestock feed or allow livestock to graze on treated foliage.

Crops listed on this label may be planted into the treated area at any time; all other crops may be planted 30 days after application. Pre-harvest application is not recommended for alfalfa grown for seed, as a reduction in germination or vigor may occur.

#### Conservation Reserve Program (CRP)

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

# Renovation (Rotating out of CRP), Site Preparation

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

Post-emergence Weed Control in Dormant CRP Grasses, Wiper Applications Over-the-Top

<u>Use instructions:</u> This product may be used to suppress competitive growth and seed production of
undesirable vegetation in CRP acres. Such applications may be made with wiper application equipment
or as a broadcast or spot treatment to dormant CRP grasses. For selective applications with broadcast
spray equipment, apply 5 - 8 fl. oz. of this product per acre in early spring before desirable CRP grasses,
such as crested and tall wheatgrass, break dormancy and initiate green growth. Late fall applications can
be made after desirable grasses have reached dormancy.

<u>Precautions</u>, <u>restrictions</u>: Some stunting of CRP perennial grasses will occur if broadcast applications are made when plants are not dormant. No waiting period is required between application and grazing or harvesting for feed. Do not apply more than 64 fl. oz. per acre per year onto CRP grasses.

#### Grass Seed or Sod Production

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

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

Preplant, At-Planting, Preemergence, Renovation, Removal of Established Stand, Site Preparation

Use instructions: This product controls most existing vegetation for purposes of renovating turf or forage grass seed production areas, or for establishing turfgrass grown for sod. It may be used to destroy remaining undesirable grass vegetation when production fields are converted to alternate species or crops. Apply before, during, or after planting, or for renovation purposes. For maximum control of existing vegetation, delay planting to determine if any re-growth of underground plant parts occurs. Where existing vegetation is growing under mowed turfgrass management, apply this product after omitting at least one regular mowing to allow sufficient growth for good interception of the herbicide spray. Where repeat treatments are necessary, sufficient re-growth must be attained prior to application. For warmseason grasses, such as bermudagrass, summer or fall application provides best control. Broadcast equipment may be used to control sod remnants or other unwanted vegetation after sod is harvested. Application rates of up to 3.3 qts. per acre may be used to totally remove an established stand of tough to kill grass species.

<u>Precautions, restrictions:</u> Do not disturb soil or underground plant parts before treatment. Tillage or renovation techniques such as vertical mowing, coring or slicing must be delayed for 7 days after application to allow proper translocation into underground plant parts. If application rates total 4 pts. per acre or less, no waiting period between treatment and feeding or livestock grazing is required. If the rate is greater than 4 pts. per acre, remove domestic livestock before application and wait 8 weeks after application before grazing or harvesting. For any crop not listed for treatment in this label, applications must be made at least 30 days prior to planting. Applications must be made prior to the emergence of the crop to avoid crop injury.

#### **Shielded Sprayers**

<u>Use instructions</u>: Apply 22 - 64 fl. oz. of this product in 10 - 20 gallons of water per acre to control weeds between grass seed rows. Uniform planting in straight rows aid in shielded sprayer applications. Best results are obtained when the grass seed crop is small enough to easily pass by the protective shields. For additional instructions, see "Shielded and Hooded Applicators" in the "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label.

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

#### Wiper Applications Over-the-Top

<u>Use instructions:</u> Applicators must be adjusted so that the wiper contact point is at least 2 inches above the desirable vegetation. Weeds must be a minimum of 6 inches above the desirable vegetation. Better results may be obtained when more of the weed is exposed to the herbicide solution. Weeds not contacted by the herbicide solution will not be affected. This may occur in dense clumps, severe infestations, or when height of weeds varies so that not all weeds are contacted. In these instances, repeat treatments may be necessary. For additional instructions, see "Wiper Applicators" in the "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label.

<u>Precautions</u>, <u>restrictions</u>: Contact of the herbicide solution with desirable vegetation may result in damage or destruction. Such damage shall be the sole responsibility of the applicator.

# **Spot Treatments**

Use instructions: Use a 1.0 % solution.

Precautions, restrictions: Apply this product prior to heading of grasses grown for seed. The crop

receiving the spray in the treated area will be killed. Take care to avoid drift or spray outside the target area for the same reason. Hand-held equipment may be used to control sod remnants or other unwanted vegetation after sod is harvested.

**Creating Rows in Annual Ryegrass** 

<u>Use instructions:</u> Use 11 - 22 fl. oz. of this product per acre. Use the higher rate when the ryegrass is greater than 6 inches tall. Best results are obtained when applications are made before the ryegrass reaches 6 inches in height.

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

Grower assumes all responsibility for crop losses from misapplication.

#### **Pasture Grasses**

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

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

Pre-plant, Pre-emergence and Pasture Renovation

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

<u>Precautions, restrictions:</u> If application rates total 64 fl. oz. per acre or less, no waiting period between treatment and feeding or livestock grazing is required. If the rate is greater than 64 fl. oz. per acre, remove domestic livestock before application and wait 8 weeks after application before grazing or harvesting. Crops listed for treatment in this label may be planted into the treated area at any time; for other crops, wait 30 days between application and planting.

Spot Treatment and Wiper Applications Over-the-Top

<u>Use instructions:</u> This product may be applied as a spot treatment or with wiper applicators in pastures. Applications may be made in the same area at 30-day intervals.

<u>Precautions, restrictions:</u> For spot treatments or wiper application methods using rates of 64 fl. oz. per acre or less, the entire field or any portion of it may be treated. When spot treatments or wiper applications are made using rates above 64 fl. oz. per acre, no more than 10% of the total pasture may be treated at any one time. To achieve maximum performance, remove domestic livestock before application and wait 7 days after application before grazing livestock or harvesting.

Postemergent Weed Control (Broadcast Treatments)

<u>Use instructions</u>: This product may be used to suppress competitive growth and seed production of annual weeds and undesirable vegetation in pastures. For selective applications with broadcast spray equipment, apply 8 – 11 fl. oz. of this product per acre in early spring before desirable perennial grasses break dormancy and initiate green growth. Late fall applications can be made after desirable perennial grasses have reached dormancy.

<u>Precautions, restrictions:</u> Some stunting of perennial grasses will occur if broadcast applications are made when plants are not domant. No waiting period is required between application and grazing or harvesting for feed. Use of higher application rates will cause stand reductions. Do not apply more than 64 fl. oz. per acre per year onto pasture grasses except for renovation uses (see instructions above). If replanting is needed due to severe stand reduction, applications must be made at least 30 days prior to planting any crop not listed for treatment in this label.

For the control of annual weeds in coastal bermudagrass pastures prior to spring growth or immediately after first cutting. Apply this product at 10 fl. oz. per acre to control the weeds listed below and most other winter annual grass and broad leaf weeds in established coastal bermudagrass pastures.

Annual bluegrass
Cheat
Crabgrass
Henbit
Johnsongrass, seedling
Little barley
Oats
Ryegrass, Italian
Sandbur, field
Sunflower
Wheat
Wild mustard

Applications prior to spring growth.

<u>Use instructions</u>: Apply this product in either late winter or early spring, but before new coastal bermudagrass growth begins in the spring. Applications to new growth can damage the bermudagrass.

<u>Precautions</u>, <u>restrictions</u>: Remove domestic livestock from the pasturé before making the application. Wait 60 days after making this application before grazing or harvesting the treated area.

Applications following the first cutting.

<u>Use instructions</u>: Apply this product after the first bermudagrass cutting when the bermudagrass has not yet begun to re-grow. Applications made after re-growth has begun can damage the bermudagrass.

<u>Precautions</u>, <u>restrictions</u>: Remove domestic livestock from the pasture before making the application. Wait 28 days after making this application before grazing or harvesting the treated area.

NOTE: ONLY ONE APPLICATION PER YEAR MAY BE MADE TO ANY ONE FIELD. A SPRING APPLICATION PRIOR TO GROWTH AND AN APPLICATION FOLLOWINGTHE FIRST CUTTING MAY NOT BE MADE ON THE FIELD DURING THE SAME YEAR.

## Rangelands

# Types of applications: Postemergence.

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

<u>Use instructions:</u> Apply 8 - 11 fl. oz. of this product per acre to control or suppress many weeds, including downy brome, cheatgrass, cereal rye and jointed goatgrass in rangelands. Apply when most brome plants are in early flower and before the plants, including seedheads, turn color. Allowing for secondary weed flushes to occur in the spring following rain events further depletes the seed reserve and encourages perennial grass conversion on weedy sites. Fall applications are possible, and suggested, where spring moisture is usually limited and fall germination allows for good weed growth.

For medusahead, apply 11 fl. oz. of this product per acre at the 3-leaf stage. Delaying applications beyond this stage will result in reduced or unacceptable control. Controlled burning may be useful in eliminating the thatch layer produced by slow decaying culms prior to application. Allow new growth to occur before spraying after a burn. Repeat applications in subsequent years may be necessary to eliminate the seedbank before reestablishing desirable perennial grasses in medusahead-dominated

rangelands.

<u>Precautions, restrictions:</u> Slight discoloration of the desirable grasses may occur, but they will regreen and regrow under moist soil conditions as effects of this product wear off. Do not use ammonium sulfate when spraying rangeland grasses with this product. No waiting period between treatment and feeding or grazing of livestock is required. Do not apply more than 64 fl. oz. per acre per year.

#### ROUNDUP READY CROPS

ROUNDUP READY CROPS CONTAIN A PATENTED GENE THAT PROVIDES TOLERANCE TO, GLYPHOSATE, THE ACTIVE INGREDIENT IN THIS PRODUCT. THIS PRODUCT WILL CAUSE SEVERE CROP INJURYOR DESTRUCTION AND YIELD LOSS IF APPLIED TO CROPS THAT ARE NOT GLYPHOSATE TOLERANT. AVOID CONTACT WITH FOLIAGE, GREEN STEMS, OR FRUIT OF CROPS, OR ANY DESIRABLE PLANTS THAT DO NOT CONTAIN A GLYPHOSATE TOLERANCE GENE, AS SEVERE PLANT INJURY OR DESTRUCTION WILL RESULT. Information on Roundup Ready crops may be obtained from your seed supplier. Roundup Ready crops must be purchased from an authorized licensed seed supplier.

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

THIS PRODUCT MAY ONLY BE USED FOR POST-EMEREGENCE APPLICATION ONLY ON CROP VARIETIES DESIGNATED AS CONTAINING THE ROUNDUP READY GENE.

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

The Roundup Ready designation indicates that the crop variety contains a patented gene that provides resistance to glyphosate. Information on Roundup Ready crop varieties may be obtained from your seed supplier. Roundup Ready crop varieties must be purchased from an authorized licensed seed supplier.

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

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

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

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

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

Unless otherwise directed, nonionic surfactant normally may be added to the spray solution for applications to Roundup Ready crops. 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 precautionary statements and other information appearing on the surfactant label.

Use of ammonium sulfate with this product for applications to Roundup Ready® crops is an option. Refer to the "MIXING" section for use instructions for ammonium sulfate.

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

**NOTE:** The following 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 pre-plant burndown treatment of this product is suggested 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 normally requires a second application of this product for complete control. The second application must be made after some regrowth has occurred and at least 10 days after a previous application of this product.

Alfalfa with	Roundup	Ready	Gene
--------------	---------	-------	------

Crop	LIMITATIONS
Roundup Ready Alfalfa	Utilize the annual maximum use rate in the table for this section. For additional information on maximum application rates refer to the "PRODUCT INFORMATION" section of this label. For precautionary instructions regarding the use of this product in Roundup Ready crops refer to the "ROUNDUP READY CROPS" section of this label. In-crop (over-the-top) application of this product in Roundup Ready alfalfa will eliminate non-glyphosate tolerant species used as a companion or cover crop or is over-seeded with a second species.  Do not use more than 44 fl. oz. of this product per acre for any single in-crop application. Allow 7 days between sequential applications of this product. For all in-crop applications in both newly established (seeding year) and established stands (non-seeding year) do not use more than the combined total per year of 4.1 qts. per acre.  Before application, remove domestic livestock. After treatment, allow a minimum of 5 days before grazing, cutting and feeding of forage and hay.  Tanks mixtures of this product with other herbicides, insecticides, or fungicide may result in crop injury or reduced weed control.  Do not apply when ground is frozen or snow covered.

Types of applications: Pre-plant, At-planting, Pre-emergence, Post-emergence (In-crop)

Maximum Applications Rates	Rate qts./Acre	
Combined total per year for all applications, including pre- plant during year of establishment	5.3	
Combined total per year for in-crop applications on newly established and established stands	4.1 (132 fl. oz)	
Pre-plant, at-planting and pre-emergence single applications	1.375 (44 fl. oz.)	

**Pre-plant, At-planting, Pre-emergence:** Use this product before, during or after planting Roundup Ready alfalfa.

Post-emergence (In-crop): Use this product over-the-top of Roundup Ready alfalfa (in-crop) from

emergence until 5 days prior to cutting. For maximum crop yield and quality potential of the forage and hay, apply this product after weeds have emerged but before alfalfa growth or re-growth interferes with spray coverage of the target weeds.

For application rates for specific weeds, see the "ANNUAL WEEDS RATE" section and "PERENIAL WEEDS RATE" section of this label. At the use rates listed, this product will control these annual and perennial grasses and broadleaf weeds. Use of this product in Roundup Ready alfalfa will also suppress or controls the parasitic weed Dodder (Cuscuta spp.). Repeat applications normally are necessary for complete control.

New Stand Establishment (Seeding Year)- In alfalfa, up to 10 % of the seedlings may not contain a Roundup Ready gene due to the biology and breeding constraints, and will not survive after the first application of this product. To eliminate the undesirable effects of stand gaps created by this loss of plants, make a single application of at least 22 fl. oz. of this product per acre at or before the 4-trifoliate growth stage. Use application rates for new stand establishment (seeding year) listed in this section.

**Application Rates** 

New Stand Establishment (Seeding Year)	Rate fl. oz./Acre	Stage
Prior to First Cutting	22 - 44	From emergence up to 4 trifoliate leaves
Prior to First Cutting	Up to 44	From 5 trifoliate leaves up to 5 days before first cutting
After First Cutting	Up to 44	In-crop application, per cutting, up to 5 days before cutting

**Established Stands (Non-seeding Year) -** Use application rates for in-crop applications to established stands of alfalfa (non-seeding year) listed in this section.

**Application Rates** 

Established Stands (Non-seeding Year)	Rate fl. oz./Acre	Stage
	Up to 44	In-crop applications, per cutting, up to 5 days before cut

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

Tank Mixture Partners: Apply with products listed in this section for post-emergence (in-crop) over the top application to Roundup Ready alfalfa. Check that the partner product used is labeled for this use on Roundup Ready alfalfa. Refer to the partner product label for important information in regards to the use instructions, spray additive requirements, weeds controlled, the size range of weeds that are to be treated, and application restrictions including pre-harvest intervals and crop rotation information. Follow the specifications listed on the most restrictive label when planning and applying the tank mixture combination.

New Stand Establishment (Seeding Year): Apply this product to Roundup Ready alfalfa postemergence (in-crop) over-the-top at up to 44 fl. oz. per acre in a tank-mix with the herbicides listed in this section. Apply to emerged weeds, but before the alfalfa growth or re-growth interferes with spray coverage of the target weeds.

[Select the active ingredient(s) or brand name of product(s) for the products listed that are registered for use on alfalfa at the time of printing this label.

clethodim, imazamox, imazethapyr, quizalofop p-ethyl, sethoxydim

Assure II, Poast, Prism, Pursuit, Raptor, SelectMAX]

[If the list contains Pursuit or Raptor add the following advisor statement. A temporary reduction in growth normally occurs when Pursuit or Raptor is applied to seedling alfalfa. Do not use methylated seed oil or

crop oil concentrate with this product in tank mixtures with Pursuit or Raptor as unsatisfactory crop injury normally results.]

**Established Stands (Non-Seeding Year):** Apply this product to established stands of Roundup Ready alfalfa post-emergence (in-crop) over-the-top with tank mixture partners according to the growing condition of alfalfa listed below.

Actively growing alfalfa: Apply this product at up to 44 fl. oz. per acre in a tank-mix with the herbicides listed in this section.

[Select the active ingredient(s) or brand name of products(s) for the products listed that are registered for use on alfalfa at the time of printing this label.

clethodim, imazamox, imazethapyr, sethoxydim

Assure II, Poast, Prism, Pursuit, Raptor, SelectMAXI

[If the list contains Pursuit or Raptor add the following advisor statement. Do not use methylated seed oil or crop oil concentrate with this product in tank mixtures with Pursuit or Raptor as unsatisfactory crop injury normally results.]

Dormant alfalfa: Apply this product at up to 44 fl. oz. per acre for control of emerged annual grasses and broadleaf weeds when alfalfa is dormant in a tank mixture with the herbicides list in the section. Apply when the daily temperature remains above freezing.

[Select the active ingredient(s) or brand name of products(s) for the products listed that are registered for use on alfalfa at the time of printing this label.

imazamox, metribuzin, propyzamide

Kerb 50-W, Lexone, Pursuit, Raptor, Sencor\_]

[If the list contains Pursuit or Raptor add the following advisor statement. Do not use methylated seed oil or crop oil concentrate with this product in tank mixtures with Pursuit or Raptor as unsatisfactory crop injury normally results.]

#### Seed Production in Roundup Ready Alfalfa

Use 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.

For ground application 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.

For aerial application, apply the appropriate rate of this product in 3 to 15-gallons of spray solution per acre.

DO NOT EXCEED 44 FL. OZ. OF THIS PRODUCT PER ACRE WHEN MAKING APPLICATION BY AIR. FOR AERIAL APPLICATION IN CALIFORNIA.

TYPES OF APPLICATION: Preplant, At-planting, Preemergence, Postemergence and Post-harvest of Seed.

Maximum Application Rates

Combined total per year for all applications	5.3 qts. per acre
Total of all Preplant, At-planting and	44 fl. oz. per acre
Preemergence applications	
Total in-crop application rate from emergence	4.0 qts. per acre

through the late vegetative stage *	E EMPS (2) 10
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 application of this product. For any crop NOT listed in the label booklet, application must be at least 30 days prior to planting.

**Over-the-top application**: Broadcast application of this product may be made using ground or aerial equipment in-crop to 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 should not exceed 44 fl. oz. per acre. Sequential applications of this product should be at least 7 days apart.

Due to the biology and breeding constraints of alfalfa, up to 10% of the seedlings are susceptible and will not survive or thrive after the first application of this product. A single application of at least 22 fl. oz. per acre of this product should be applied at or before the 3 to 4 trifoliate growth stage to eliminate the effects of stand gaps created by the loss of non-Roundup Ready plants.

**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. Application 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.

**Post-harvest application**: Following harvest of Roundup Ready alfalfa seed, the stand may be managed for forage and hay production. Refer to the Roundup Ready alfalfa section of this product label booklet for rates and timing of application for forage and hay production.

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

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

PRECAUTIONS AND 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. The use of harvested Roundup Ready alfalfa seed is not suitable for, and is not allowed for production of alfalfa sprouts.

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

Camalani	41- 41	Daniel	Dander	0
Canola w	ith the	Roundub	Ready	Gene

Crop	LIMITATIONS
Roundup Ready Canola	Utilize the annual maximum use rate in the table in this section. For

# (Spring Varieties) additional information on maximum application rates refer to the "PRODUCT INFORMATION" section of this label. For precautionary instructions regarding the use of this product per acre in Roundup Ready crops refer to the "ROUNDUP READY CROPS" section of this label. Do not apply more than 44 fl. oz. of this product per acre per season for all pre-plant, at-planting and pre-emergence applications combined. Do not apply more than 2 in-crop (over-the-top) broadcast applications from crop emergence through the 6-leaf stage of development. Do not use more than 22 fl. oz. per acre of this product for all in-crop applications. After treatment, allow a minimum of 60 days before canola harvest.

A definition of Roundup Ready spring canola is those varieties of Roundup Ready canola that are planted in the spring and harvested in the fall and do not undergo a winter dormancy period.

Types of applications: Pre-plant, At-planting, Pre-emergence, Post-emergence (In-crop)

Maximum Applications Rates	Rate fl. oz./Acre
Total of all Pre-plant, At-planting, Pre-emergence applications	44
Total of all In-crop Applications from emergence to 6-leaf Stage	22

**Pre-plant, At-planting, Pre-emergence:** Use this product before, during or after planting Roundup Ready canola

**Post-emergence (In-crop):** Use this product post-emergence to spring varieties of Roundup Ready canola from emergence through the 6-leaf stage of development. To minimize crop injury and yield loss, avoid application during bolting or flowering. Eliminate competing weeds early to maximize yield potential. Single Application— For the control of annual weeds, use 11 - 16 fl. oz. per acre no later than the 6-leaf stage. Avoid overlapping applications, which could result in temporary yellowing, delayed flowering, and/or growth reduction. If more than 11 fl. oz. per acre is applied after the 4-leaf stage, then similar crop injury may result.

Sequential Application- To maximize the control of early emerging annual weeds and perennial weeds such as Canola thistle and quackgrass, or when more than one application is needed for difficult to control weeds use sequential applications. Use 11 fl. oz. of this product per acre to 1 - 3-leaf canola. Allow a minimum of 10 days before application, but no later than the 6-leaf stage for the sequential application.

Crop	LIMITATIONS
Roundup Ready Canola (Winter Varieties)	Utilize the annual maximum use rate in the table in this section. For additional information on maximum application rates refer to the "PRODUCT INFORMATION" section of this label. For precautionary instructions regarding the use of this product in Roundup Ready crops refer to the "ROUNDUP READY CROPS" section of this label. Do not apply more than 44 fl. oz. of this product per season for all pre-plant, at-planting and pre-emergence applications combined.
	Do not apply more than 2 in-crop (over-the-top) broadcast applications from crop emergence up to the onset of bolting. Do not use more than 44 fl. oz. per acre of this product for all in-crop applications. After treatment, allow a minimum of 60 days before canola harvest. There is no waiting period between last application and open grazing of livestock. Use of more than 16 fl. oz. per acre prior to the 6-leaf stage could result in reduced crop growth in the fall.  No waiting period is required between application and open grazing of

#### livestock.

A definition of Roundup Ready winter canola is those varieties of Roundup Ready canola that are planted in the fall and harvested in the following spring or summer. These canola varieties are intended to undergo a cold dormancy cycle in the winter.

Types of applications: Pre-plant, At-planting, Pre-emergence, Post-emergence (In-crop)

Maximum Applications Rates	Rate fl. oz./Acre
Total of all Pre-plant, At-planting, Pre-emergence applications	44
Total of all In-crop applications from emergence to canopy closure or prior to bolting in the spring	44

**Pre-plant, At-planting, Pre-emergence:** Use this product before, during or after planting Roundup Ready canola

**Post-emergence (In-crop)**: Apply this product to winter varieties of Roundup Ready canola from emergence to canopy closure in the fall and prior to bolting in the spring. To minimize crop injury and yield loss, avoid application during bolting or flowering. Eliminate competing weeds early to maximize yield potential.

Use a sequential application of this product for control of weeds with multiple germination times, or suppressed (stunted) weeds, or weeds that have overwintered. Apply the second application after some weed re-growth has occurred. Allow a minimum 60 days before the sequential application. Single Application-\_ When weeds are small and actively growing in the fall, use 11 - 16 fl. oz. of this product per acre. When weeds are dense or overwintered, or large and well established, use the higher rate. Avoid overlapping applications, which could result in temporary yellowing, and/or growth reduction. If more than 16 fl. oz. per acre is applied before the 6-leaf stage in the fall, then similar crop injury may result

Sequential Application-\_Use 11 fl. oz. of this product per acre to 2-leaf or larger canola in the fall, followed by a sequential application at the same rate. Allow a minimum of 60 days between applications but do not apply after bolting in the spring. For best control of early emerging annual weeds and winter emerging weeds such as downy brome, jointed goatgrass and ryegrass, and for weeds that have over wintered, use a sequential application. This product will control or suppress most perennial weeds. To reduce perennial weeds competition with the crop, apply a sequential treatment.

# Corn Hybrids with the Roundup Ready 2 Technology

# The following instructions refer to corn hybrids Roundup Ready 2 Technology and seed products displaying Roundup Ready 2 Technology logo.

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

TYPES OF APPLICATIONS: Pre-plant, At-Planting, Pre-emergence, Post-emergence (In-Crop), Spot Treatment Pre-harvest. Post-Harvest.

Maximum Allowable Combined Application	Quantities Per Season
Combined total per year for all applications	5.3 qts. per acre
Total of all Pre-plant, Pre-emergence, At-Planting applications	3.3 qts. per acre
Single in-crop application	32 fl. oz. per acre
Total in-crop applications from emergence through the 48 inch stage	64 fl. oz. per acre
Maximum pre-harvest application rate after maximum kernel fill	22 fl. oz. per acre

is complete and the crop is physiologically mature (black layer formation) until 7 days before harvest

# Pre-plant, Pre-emergence, At-Planting

<u>Use instructions</u>: Apply this product alone or in a tank mixture before, during or after planting corn.

Tank Mixture Partners: Use this product as tank partner mixture with products listed below. Apply these tank mixtures in 10 - 20 gallons of water or 10 - 60 gallons of nitrogen solution per acre.

2,4-D, acetochlor, Aim, Aim EC, alachlor, atrazine, Axiom, Balance PRO, Banvel, Bicep MAGNUM, Bicep II MAGNUM, Bicep Lite II MAGNUM, Bullet, Cinch, Cinch ATZ, Clarity, Define, Degree, Degree Xtra, Distinct, Dual II MAGNUM, Epic, Frontier, FulTime, Guardsman, Guardsman MAX, Harness, Harness Xtra, Harness Xtra 5.6L, Hornet, Keystone, Keystone LA, Lariat, Leadoff, Linex, Lorox, Marksman, metolachlor, s-metolachlor, MeToo-Lachlor II, Micro-Tech, Outlook, pendimethalin, Prowl, Python, Python II, Radius, Resolve, Resource, Shark, Sharpen, simazine, Stalwart C, Stalwart Xtra, Surpass, TopNotch, TripleFlex

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

## Post-emergence (In-Crop)

<u>Use instructions</u>: This product may be applied over-the-top or with drop nozzles to corn hybrids with Roundup Ready 2 Technology from emergence through the  $V_8$  stage (8 leaves with collars) or until corn reaches 30 inches in height, whichever comes first. When corn reaches 24 - 30 inches tall, drop nozzles are suggested for optimum spray coverage and weed control. When corn reaches 30 - 48 inches tall, apply ONLY with drop nozzles adjusted to avoid spraying into the whorls of the corn plants. Refer to tables above for rates of this product and mixtures for the specific weeds to be controlled.

When applied as directed, this product controls labeled annual grass and broadleaf weeds in Roundup Ready corn. Many perennial grasses and broadleaf weeds will be controlled or suppressed with one or more application of this product. The post-emergent application of 16 - 22 fl. oz. per acre of this product must be made before the weeds reach a height and/or density that the weeds become competitive with the crop, normally 4 inch tall weeds or less.

This product may be applied alone as a post-emergence (in-crop) application to provide control of emerged weeds listed on this label. If new flushes of weeds occur, a sequential application of this product at 16 - 22 fl. oz. per acre will control the labeled grasses and broadleaf weeds.

Tank Mixture Partners: Use this product as tank partner mixture with products listed below:

2,4-D, acetochlor, Aim EC, alachlor, atrazine, Banvel, Basis, Basis Gold, Bullet, Callisto, Clarity, Degree, Degree Xtra, Distinct, Equip, Harness, Harness Xtra, Harness Xtra 5.6L, Hornet, Impact, Marksman, Micro-Tech, Option, Resolve, Resource, Status, TripleFlex, Warrant.]

Tank-mix Partner	Maximum Height of Corn for Application	
Degree Degree Xtra Harness Harness Xtra Harness Xtra 5.6L TripleFlex Warrant	11 inches	
Bullet* Micro-Tech*	5 inches	
atrazine	12 inches	

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

<u>Precautions</u>. See the "ROUNDUP READY CROPS" section of this label for precautionary instructions for use in Roundup Ready crops. Single in-crop applications of this product are not to exceed 1 qt. per acre. Sequential in-crop applications of this product from emergence through the V8 stage or 30 inches must not exceed a total of 64 fl. oz. per acre per growing season. Allow a minimum of 10 days between in-crop applications of this product. Allow a minimum of 50 days between application of this product and harvest of corn forage.

#### Pre-harvest

<u>Use instructions</u>: In corn hybrids with Roundup Ready 2 Technology, up to 22 fl. oz. per acre of this product can be applied pre-harvest. Make applications at 35 % grain moisture or less. Ensure that maximum kernel fill is complete and the corn is physiologically mature (black layer formed).

<u>Precautions</u>, <u>restrictions</u>: Allow a minimum of 7 days between a pre-harvest application harvest or feeding, of corn stover or grain. Do not apply pre-harvest if more than 44 fl. oz. per acre has been previously applied in over-the-top or drop nozzle application in crop.

#### Post-Harvest

<u>Use instructions</u>: Apply this product after harvest of corn. Higher rates are required for control of large weeds that were growing in the crop at the time of harvest. A tank partner mixtures with 2,4-D or dicamba is an option.

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

# Roundup Ready Cotton

**Types of applications:** Pre-plant, at-planting, pre-emergence, post emergent (over-the-top), selective equipment, pre-harvest.

Combined total per year for all applications	5.3 qts. per acre
Total of all Pre-plant, at-planting, pre-emergence applications	3.3 qts. per acre
Total of all in-crop applications from ground cracking to layby	2.5 qts. per acre
Maximum pre-harvest application rate	44 fl. oz. per acre 4 gts. Per acre
Combined total of all in-crop applications from emergence through h	narvest

Precautions, restrictions: See the "ROUNDUP READY CROPS" section of this label for precautionary instructions for use in Roundup Ready crops. NO MORE THAN TWO OVER-THE-TOP BROADCAST APPLICATIONS MAY BE MADE FROM CROP EMERGENCE THROUGH THE 4-LEAF (NODE) STAGE OF DEVELOPMENT. NO MORE THAN TWO APPLICATIONS ARE TO BE MADE FROM THE 5-LEAF STAGE THROUGH LAYBY. SEQUENTIAL IN-CROP OVER-THE-TOP OR POST-DIRECTED APPLICATIONS OF THIS PRODUCT MUST BE AT LEAST 10 DAYS APART AND COTTON MUST HAVE AT LEAST TWO NODES OF INCREMENTAL GROWTH BETWEEN APPLICATIONS. ALLOW A MINIMUM OF 7 DAYS BETWEEN APPLICATION AND HARVEST.

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

Use instructions: Apply this product before, during or after planting cotton.

Tank Mixture Partners: This product may be tank-mixed with 2,4-D and 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 the emergence of cotton. Read and follow label directions of all products in the tank mixture.

Caparol, Command, Cotoran, Cotton PRO, Direx, Dual MAGNUM, Dual II MAGNUM, Karmex, Meturon, PARRLAY, Reflex, Sharpen, Stalwart, Staple, Valor, Warrant, Zorial, diuron,

metolachlor, pendimethalin

Precautions, restrictions: Maximum quantity of this product that may be applied for all preplant, at-planting and preemergence applications combined is 3.3 qts. per acre per season. 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.

#### Over-the-Top

<u>Use instructions:</u> Apply this product by aerial or ground application equipment at rates up to 22 fl. oz. per acre per application post-emergence 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). NO MORE THAN TWO OVER-THE-TOP BROADCAST APPLICATIONS MAY BE MADE FROM CROP EMERGENCE THROUGH THE 4-LEAF (NODE) STAGE OF DEVELOPMENT. SEQUENTIAL OVER-THE-TOP OR POST-DIRECTED APPLICATIONS OF THIS PRODUCT IN-CROP MUST BE AT LEAST 10 DAYS APART AND COTTON MUST HAVE AT LEAST TWO NODES OF INCREMENTAL GROWTH BETWEEN APPLICATIONS. Over-the-top applications made after the 4-leaf (node) stage of development may result in boll loss, delayed maturity and/or yield loss.

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

Tank Mixture Partners: This product may be tank-mixed with the following products and applied over the top of Roundup Ready cotton up to the 4-leaf stage. Ensure that the 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.

Assure II, Dual MAGNUM, Fusilade, metolachlor, PARRLAY, Poast Plus, Reflex, Select MAX, Staple, Warrant

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

Dual MAGNUM applied over the top of Roundup Ready cotton may cause leaf injury in the form of necrotic spotting.

Salvage treatment: This treatment may be used after the 4-leaf stage of development and must only be used where weeds threaten to cause the loss of the crop. 22 fl. oz. per acre may be applied either as an over-the-top application or as a post-directed treatment sprayed higher on the cotton plants and over the weeds. NOTE: SALVAGE TREATMENTS WILL RESULT IN SIGNIFCANT BOLL LOSS, DELAYED MATURITY AND/OR YIELD LOSS. NO MORE THAN ONE SALVAGE TREATMENT IS TO BE USED PER GROWING SEASON.

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

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

#### Selective Equipment

<u>Use instructions</u>: This product may be applied using precision post-directed or hooded sprayers at rates up to 22 fl. oz. per acre per application to Roundup Ready cotton through layby. At this stage, post-directed equipment must be used which directs the spray to the base of the cotton plants. Contact of the spray with cotton leaves must be avoided to the maximum extent possible. To minimize spray onto the leaves of the cotton plants, place nozzles in a low position directing a horizontal spray pattern under the cotton leaves to contact weeds in the row, and maintain low spray pressure (less than 30 psi). For best results, make applications while weeds are small (less than 3 inches).

Precautions, restrictions: See the "SELECTIVE EQUIPMENT" part of the "APPLICATION EQUIPMENT

AND TECHNIQUES" section of this label for information on proper use and calibration of this equipment.

Tank Mixture Partners: This product can be tank-mixed with the following products for in-crop application using precision post-directed or hooded sprayers. 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.

Aim, Caparol, Direx, Envoke, Layby-Pro, PARRLAY, pendimethalin, Staple, Valor.

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

Precautions, restrictions: Maximum quantity of this product that may be applied for all in-crop applications from ground-cracking to layby combined is 2.5 qts. per acre per season. NO MORE THAN TWO APPLICATIONS OF THIS PRODUCT SHOULD BE MADE FROM THE 5-LEAF STAGE THROUGH LAYBY. SEQUENTIAL OVER-THE-TOP OR POST-DIRECTED APPLICATIONS OF THIS PRODUCT IN-CROP MUST BE AT LEAST 10 DAYS APART AND COTTON MUST HAVE AT LEAST TWO NODES OF INCREMENTAL GROWTH BETWEEN APPLICATIONS. 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.

#### Pre-harvest

<u>Use instructions:</u> This product may be applied for pre-harvest annual and perennial weed control as a broadcast treatment to Roundup Ready cotton after 20 % boll crack. Up to 44 fl. oz.of this product may be applied using either aerial or ground spray equipment. **NOTE:** This product will not enhance the performance of harvest aids when applied to Roundup Ready cotton.

<u>Precautions, restrictions:</u> Allow a minimum of 7 days between application and harvest of cotton. THE USE OF ADDITIVES FOR PRE-HARVEST APPLICATION OF THIS PRODUCT TO ROUNDUP READY COTTON IS PROHIBITED.

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

Crop	LIMITATIONS	
Roundup Ready Flex Cotton	Utilize the annual maximum use rate in the table in this section. For additional information on maximum application rates refer to the "PRODUCT INFORMATION" section of this label.  For precautionary instructions regarding the use of this product in Roundup Ready crops refer to the "ROUNDUP READY CROPS" section of this label.	

The information furnished in this section is specific to and only appropriate for use with varieties designated as Roundup Ready Flex cotton. If application instructions in this section are used on other than Roundup Ready Flex cotton, crop injury and reduced yields will result. DO NOT combine the instructions in this section with those in the "Roundup Ready Cotton" section of this label, or with other Roundup Ready cotton or Roundup Ready Flex cotton instructions on labeling for 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 applications: Pre-plant, At-planting, Pre-emergence, Post-emergence (In-crop), Pre-harvest

Maximum Applications Rates	Rate
	/Acre

Combined total per year for all applications	5.3 qts.
Total of all Pre-plant, At-planting, Pre-emergence applications	3.3 qts.
Total of all In-crop applications from cracking to 60 % open bolls	4.0 qts
Total of all In-crop applications between layby and 60 % open bolls	44 fl. oz
Total of all In-crop applications from 60 % open bolls to 7 days prior to harvest	44 fl. oz.
Total of all In-crop applications from emergence through harvest	4.0 qts.

**Pre-plant, At-planting, Pre-emergence: Use this product before, during or after planting Roundup** Ready Flex cotton.

Tank Mixture Partners: Apply with 2,4-D or Clarity and use prior to planting only. Apply this product to Roundup Ready Flex cotton prior to crop emergence in a tank-mix with the herbicides listed in this section. Check that the partner product used is labeled for application prior to planting or the crop emergence on Roundup Ready Flex cotton. Refer to the partner product label for important information in regards to the use instructions, spray additive requirements, weeds controlled, the size range of weeds that are to be treated, and application restrictions including pre-harvest intervals and crop rotation information. Follow the specifications listed on the most restrictive label when planning and applying the tank mixture combination.

[Select the active ingredient(s) or brand name of product(s) for the products listed that are registered on Roundup Ready Flex cotton for use prior to emergence of cotton at the time of printing this label.

Caparol, Command, Cotoran, Cotton-Pro, Direx, diuron, Dual MAGNUM, Dual II MAGNUM, Karmex, metolachlor, Meturon, PARRLAY, pendimethalin, Reflex, Sharpen, Stalwart, Staple, Valor, Warrant, Zorial]

Do not use more than 3.3 qts. per acre for all pre-plant, at-planting and pre-emergence applications combined.

Post-emergence (In-crop): Apply this product to control annual grasses and broadleaf weeds listed on this label in Roundup Ready Flex cotton. Eliminate competing weeds early to maximize yield potential. Use one or more application of this product to control or suppress many potential perennial weeds. In the first application, use 22 fl. oz. per acre to control or suppress small (1 - 3 inch tall) annual grasses and broadleaf weeds. Apply this product by ground equipment post-emergence to Roundup Ready Flex cotton rates at up to 32 fl. oz. per acre per application. To achieve more thorough weed coverage, apply with post-directed spray equipment.

Tank Mixture Partners: Apply this product with herbicides listed in this section in a post-emergence (in-crop) over-the-top of Roundup Ready Flex cotton. Check that the partner product used is labeled for application post-emergence (in-crop) on Roundup Ready Flex cotton. Refer to the partner product label for important information in regards to the use instructions, spray additive requirements, weeds controlled, the size range of weeds that are to be treated, and application restrictions including pre-harvest intervals and crop rotation information. Follow the specifications listed on the most restrictive label when planning and applying the tank mixture combination.

[Select the active ingredient(s) or brand name of products(s) for the products listed that are registered for use post-emergence (in-crop) to cotton at the time of printing this label.

Assure II, Dual MAGNUM, Envoke, Fusilade, metolachlor, PARRLAY, Poast Plus, Reflex, Select MAX, Staple, Warrant]

[If the list contains Staple, Dual Magnum, Stalwart add the appropriate advisor statement. Staple may cause leaf yellowing and/or leaf crinkling when applied post-emergence (in-crop) in Roundup Ready Flex cotton. Dual Magnum applied over-the-top of Roundup Ready Flex cotton may cause leaf injury in the form of necrotic spotting.]

Apply this product with herbicides listed in this section in a post-emergence (in-crop) using precision post-

directed or hooded sprayers on Roundup Ready Flex cotton. Check that the partner product used is labeled for application post-emergence (in-crop) on Roundup Ready Flex cotton. Refer to the partner product label for important information in regards to the use instructions, spray additive requirements, weeds controlled, the size range of weeds that are to be treated, and application restrictions including pre-harvest intervals and crop rotation information. Follow the specifications listed on the most restrictive label when planning and applying the tank mixture combination. This product can be tank-mixed with the following products for in-crop.

[Select the active ingredient(s) or brand name of products(s) for the products listed that are registered for use post-emergence (in-crop) to cotton at the time of printing this label.

Aim, Caparol, Direx, Envoke, Layby-Pro, PARRLAY, pendimethalin, Staple, Valor]

[If the list contains Staple add the following advisor statement. Staple may cause leaf yellowing and/or leaf crinkling when applied post-emergence (in-crop) in Roundup Ready Flex cotton.]

#### LIMITATIONS:

Do not use more that 32 fl. oz. of this product in a single, in-crop application to RoundUp Ready Flex cotton using ground application equipment.

In-crop applications of this product greater than 22 fl. oz. quart per acre, either alone or with additional cotton products containing surfactant may cause a crop response such as leaf speckling or leaf necrosis.

Do not use more than 22 fl. oz. of this product per acre in aerial applications.

Do not use more than 44 fl. oz. of this product per acre between layby and 60% open bolls.

Do not use more than 4.0 qts. of this product per acre for all combined applications from crop emergence to 60% open bolls.

# DO NOT ADD ADDITIONAL SURFACTANT OR ADDITIVES CONTAINING SURFACTANT TO THIS PRODUCT FOR OVER-THE-TOP APPLICATION TO ROUNDUP READY FLEX COTTON.

**Pre-harvest**: Use this product on Roundup Ready Flex cotton up to 44 fl. oz. per acre for annual and perennial weed control prior to harvest after 60 % boll crack.

**NOTE:** When applied to Roundup Ready Flex cotton, this product will not enhance the performance of harvest aids.

LIMITATIONS: After treatments, allow a minimum of 7 days before harvest.

DO NOT ADD ADDITIONAL SURFACTANT OR ADDITIVES CONTAINING SURFACTANT TO THIS PRODUCT FOR PRE-HARVEST APPLICATION TO ROUNDUP READY FLEX COTTON.

IMPORTANT USE OF THIS PRODUCT IN ACCORDANCE WITH THE LABEL DIRECTIONS IS EXPECTED TO RESULT IN NORMAL GROWTH OF ROUNDUP READY FELX 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.

Crop	LIMITATIONS	
Roundup Ready Soybeans	See Maximum Allowable Application Quantities per Season Table below. For pre-harvest applications, allow a minimum of 14 days between final application and harvest of soybeans or feeding of soybeans, forage or hay. For post-emergence applications:  Do not apply more than 44 fl. oz. of this product per application per acre.	



Do not apply in the flowering stage more than a total of 44 fl. oz. of this product.

Types of applications: Pre-plant, at-planting, pre-emergence, post-emergence (in-crop), pre-harvest, post-harvest.

Maximum Allowable Combined Application Quantities	per Season
Combined total per year for all applications	5.3 qts./ acre
Total of all pre-plant, at-planting, pre-emergence applications	3.3 qts./acre
Total in-crop applications from cracking throughout flowering (R2 stage)	2.qts./acre (64 fl. oz./acre)
Maximum pre-harvest application rate	22 fl. oz./acre

**Pre-plant, Pre-emergence and At-planting:** Use this product alone or in a tank partner mixture before, during or after planting Roundup Ready soybeans. Applications must be made prior to emergence of the crop.

Tank Mixture Partners: To improve the spectrum of weed controlled, apply with tank mixtures listed in this section. Refer to the partner product label for important information in regards to the use instructions, spray additive requirements, weeds controlled, the size range of weeds that are to be treated, and application restrictions including pre-harvest intervals and crop rotation information. Follow the specifications listed on the most restrictive label when planning and applying the tank mixture combination. Check the partner product label to ensure that it is labeled for application prior to planting or the emergence of soybean.

A tank partner mixture with 2,4-D, dicamba or Clarity is an option only if applied prior to planting.

When applied prior to crop emergence, a tank partner mixture with the following herbicides is an option:

Aim	Domain	Linex	Python
Assure II	Dual Magnum	Linuron	Reflex
Axiom	Dual II Magnum	Lorox	Resource
Authority Assist	FirstRate	Lorox Plus	Scepter
Authority First		metolachlor	Select
Authority MTZ		s-metolachlor	Select Max
Authority XL		Me-too Lachlor	Sencor
Blanket	Flexstar	Micro-Tech	Sharpen
Boundary	Frontier	Outlook	Spartan
Canopy	Fusion	PARRLAY	Squadron
Canopy EX	Gangster	Pendimax	Steel
Classic	Gauntlet	pendimethalin	Trefan
Cobra	Intrro	Pursuit	Valor
Command	Lexone	Pursuit Plus	Valor XLT
Command Xtra			

**Post-emergence (In-crop):** When applied as directed, this product will control labeled annual grasses and broadleaf weeds in Roundup Ready soybeans. Applications of this product can be made in Roundup Ready soybeans from emergence (cracking) throughout flowering. Refer to the "ANNUAL WEEDS RATE TABLE" in this label for rate specifications for specific annual weeds. In an initial application of 22 fl. oz per acre on 2 - 8 inch tall weeds is suggested. Weeds will be 2 - 8 inches tall, 2 - 5 weeks after planting. If the initial application is delayed and weeds are larger, apply a higher rate of this product. Use up to 44 fl. oz. of this product per acre in any single in-crop application for control of annual weeds and where heavy weed densities exist.

Use of 22 – 44 fl. oz. 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 is suggested 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, it is suggested that 22 fl. oz. per acre of this product be applied when the weed is 8 - 12 inches tall to increase control and possibly avoid the need for a sequential application.

Tank Mixture Partners: To improve the spectrum of weed controlled, apply with tank mixtures listed in this section. Refer to the partner product label for important information in regards to the use instructions, spray additive requirements, weeds controlled, the size range of weeds that are to be treated, and application restrictions including pre-harvest intervals and crop rotation information. Follow the specifications listed on the most restrictive label when planning and applying the tank mixture combination. Check the partner product label to ensure that it is labeled for application post-emergence (in-crop) to Roundup Ready soybeans.

When applied post-emergence, a tank partner mixture from the following herbicides is an option:

Arrow	FirstRate	Poast Plus	Select Max
Assure II	Flexstar	Pursuit	Synchrony STS
Basagran	Fusilade DX	Pursuit Plus	Targa
Classic	Fusion	Raptor	Ultra Blazer
Cobra	Harmony GT XP	Reflex	Warrant
Extreme	Poast	Select	

The combined total application from crop emergence through harvest must not exceed 64 fl. oz. per acre. The maximum rate for any single in-crop application is 44 fl. oz per acre. The maximum combined total of this product that can be applied during flowering is 44 fl. oz. per acre.

**Pre-harvest:** This product provides weed control when applied prior to harvest of soybeans. Use up to 22 fl. oz. per acre of this product applied by aerial or ground application.

Care must be taken to avoid excessive seed shatter loss due to ground application equipment.

**Post-harvest:** Use this product after harvest of Roundup Ready soybeans. Higher rates are normally required for control of large weeds that were growing in the crop at the time of harvest. To improve burn down, a tank partner mixture with 2,4-D or dicamba is an option.

See Maximum Allowable Application Quantities per Season Table below. For pre-harvest applications, allow a minimum of 14 days between final application and harvest of soybeans or feeding of soybeans, forage or hay. For post-emergence applications:
Do not apply more than 44 fl. oz. of this product per application per acre.
Do not apply in the flowering stage more than a total of 44 fl. oz. of this product.
-

**Types of applications:** Pre-plant, at-planting, pre-emergence, post-emergence, pre-harvest, post-harvest.

	Qts. per Acre
Combined total per year for all applications	5.3
Pre-plant, at-planting, pre-emergence applications	3.3
Total in-crop applications from cracking throughout	2.0
flowering (R2 stage)	(64 fl. oz)
Maximum pre-harvest application rate	22 fl. oz.

Maximum Allowable Combined Application Quantities per Season

**Pre-plant, Pre-emergence and At-planting:** Use this product alone or in a tank partner mixture before, during or after planting Roundup Ready soybeans. Applications must be made prior to emergence of the crop.

Tank Mixture Partners: To improve the spectrum of weed controlled, apply with tank mixtures listed in this section. Refer to the partner product label for important information in regards to the use instructions, spray additive requirements, weeds controlled, the size range of weeds that are to be treated, and application restrictions including pre-harvest intervals and crop rotation information. Follow the specifications listed on the most restrictive label when planning and applying the tank mixture combination. Check the partner product label to ensure that it is labeled for application prior to planting or the emergence of soybean.

A tank partner mixture with 2,4-D, dicamba or Clarity is an option only if applied prior to planting.

When applied prior to crop emergence, a tank partner mixture with the following herbicides is an option:

Aim	Domain	Linex	Python
Assure II	Dual Magnum	Linuron	Reflex
Axiom	Dual II Magnum	Lorox	Resource
Authority Assist	FirstRate	Lorox Plus	Scepter
Authority First		metolachlor	Select
Authority MTZ		s-metolachlor	Select Max
Authority XL		Me-too Lachlor	Sencor
Blanket	Flexstar	Micro-Tech	Sharpen
Boundary	Frontier	Outlook	Spartan
Canopy	Fusion	PARRLAY	Squadron
Canopy EX	Gangster	Pendimax	Steel
Classic	Gauntlet	pendimethalin	Treflan
Cobra	Intrro	Pursuit	Valor
Command	Lexone	Pursuit Plus	Valor XLT
Command Xtra			

**Post-emergence (In-crop):** When applied as directed, this product will control labeled annual grasses and broadleaf weeds in Roundup Ready 2 Yield soybeans. Applications of this product can be made in Roundup Ready 2 Yield soybeans from emergence (cracking) throughout flowering. Refer to the "ANNUAL WEEDS RATE TABLE" in this label for rate specifications for specific annual weeds. In an initial application of 22 fl. oz. per acre on 2 - 8 inch tall weeds is suggested. Weeds will be 2 - 8 inches tall, 2 - 5 weeks after planting. If the initial application is delayed and weeds are larger, apply a higher rate of this product. Use up to 44 fl. oz. of this product per acre in any single in-crop application for control of annual weeds and where heavy weed densities exist.

Use of 22 – 44 fl. oz. 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 is normally required to control late flushes of weeds. IN THE SOUTHERN STATES, A SEQUENTIAL APPLICATION OF THIS PRODUCT WILL BE REQUIRED TO CONTROL NEW FLUSHES OF WEEDS IN THE ROUNDUP READY 2 YIELD SOYBEAN CROP. To control giant ragweed, it is suggested that 22 fl. oz. per acre of this product be applied when the weed is 8 - 12 inches tall to increase control and possibly avoid the need for a sequential application.

Tank Mixture Partners: To improve the spectrum of weed controlled, apply with tank mixtures listed in this section. Refer to the partner product label for important information in regards to the use instructions, spray additive requirements, weeds controlled, the size range of weeds that are to be treated, and application restrictions including pre-harvest intervals and crop rotation information. Follow the specifications listed on the most restrictive label when planning and applying the tank mixture combination. Check the partner product label to ensure that it is labeled for application post-emergence (in-crop) to Roundup Ready 2 Yield soybeans.

When applied post-emergence, a tank mixture partner from the following herbicides is an option:

Arrow	FirstRate	Poast Plus	Select Max
Assure II	Flexstar	Pursuit	Synchrony STS
Basagran	Fusilade DX	Pursuit Plus	Targa
Classic	Fusion	Raptor	Ultra Blazer
Cobra	Harmony GT XP	Reflex	Warrant
Extreme	Poast	Select	

The combined total application from crop emergence through harvest must not exceed 64 fl. oz. per acre. The maximum rate for any single in-crop application is 44 fl. oz. per acre. The maximum combined total of this product that can be applied during flowering is 44 fl. oz. per acre.

**Pre-harvest:** This product provides weed control when applied prior to harvest of soybeans. Use up to 22 fl. oz. per acre of this product applied by aerial or ground application.

Care must be taken to avoid excessive seed shatter loss due to ground application equipment.

Allow a minimum of 14 days between final application and harvest of soybeans or feeding of soybeans, forage or hay.

**Post-harvest:** Use this product after harvest of Roundup Ready 2 Yield soybeans. Higher rates normally required for control of large weeds that were growing in the crop at the time of harvest. To improve burn down, a tank partner mixture with 2,4-D or dicamba is an option.

# Roundup Ready Sugar Beet

Crop	LIMITATIONS
Roundup Ready Sugar Beet	Utilize the annual maximum use rate in the table in this section. For additional information on maximum application rates refer to the "PRODUCT INFORMATION" section of this label.  Refer to the "ANNUAL WEEDS RATE SECTION" and "PERENNIAL WEEDS RATE SECTION" of this label for application rates for specific weeds.
	For precautionary instructions regarding the use of this product in Roundup
	Ready crops refer to the "ROUNDUP READY CROPS" section of this label.
	Do not apply more than 5.3 qts. of this product per acre per season for combined total of all applications.
	Do not use more than 3.125 qts. (100 fl. oz.) of this product for all combined applications from crop emergence through harvest. Do not use more than 1 quart (32 fl. oz.) of this product per acre for any single application from crop emergence until the 8-leaf stage.
	Do not use more than 22 fl. oz. of this product per acre for any single application between the 8-leaf stage and canopy closure.  After treatment, allow a minimum of 30 days before sugar beet harvest Tanks mixtures of this product with other herbicides, insecticides, or fungicides may result in crop injury or reduced weed control.

Maximum Applications Rates	Rate qts./Acre
Combined total per year for all applications	5.3
Total of all Pre-plant, At-planting, Pre-emergence applications	3.3
Total of all applications made from emergence through the 8-leaf stage	1.75 (56 fl. oz.)
Total of all applications made after the 8-leaf stage and up to canopy closure	1.375 (44 fl. oz.)

**Pre-plant, At-planting, Pre-emergence**: Use this product before, during or after planting Roundup Ready sugar beet.

Tank Mixture Partners: Apply this product with herbicides listed in this section prior to emergence to Roundup Ready sugar beet. Check that the partner product used is labeled for application prior to emergence of sugar beet. Refer to the partner product label for important information in regards to the use instructions, spray additive requirements, weeds controlled, the size range of weeds that are to be treated, and application restrictions including pre-harvest intervals and crop rotation information. Follow the specifications listed on the most restrictive label when planning and applying the tank mixture combination.

[Select the active ingredient(s) or brand name of products(s) for the products listed that are registered for use pre-plant, at-planting, and/or pre-emergence to sugar beet at the time of printing this label.

#### Ethofumesate

#### Nortron SC]

**Post-emergence (In-crop)**: Use this product over-the-top of Roundup Ready sugar beet for control of annual grasses and broadleaf weeds from emergence to 30 days prior to harvest. To maximize yield potential, eliminate competing weeds early. Use up to 4 sequential applications of this product to achieve desired level control. Allow at least 10 days between applications. This product will control or suppress most perennial weeds. For some perennial weeds, repeat applications may be required to eliminate crop competition throughout the growing season.

Tank Mixture Partners: Apply this product with herbicides listed in this section in a post-emergence (in-crop) over-the-top of Roundup Ready sugar beet. Check that the partner product used is labeled for application post-emergence (in-crop) on Roundup Ready sugar beet. Refer to the partner product label for important information in regards to the use instructions, spray additive requirements, weeds controlled, the size range of weeds that are to be treated, and application restrictions including pre-harvest intervals and crop rotation information. Follow the specifications listed on the most restrictive label when planning and applying the tank mixture combination.

[Select the active ingredient(s) or brand name of products(s) for the products listed that are registered for use post-emergence (in-crop) to sugar beet at the time of printing this label.

Clethodim, clopyralid, desmedipham, dimethenamid, ethofumesate, s-metolchlor, phenmedipham, quizalofop-p-ethyl, triflusulfuron-methyl

Assure II, Betamix, Betanex, Dual MAGNUM, Frontier, Nortron SC, Outlook, Progress, Select, Stinger, Upbeet]

[If the list contains Betamix, Betanex, Nortron SC and Progress add the following advisor statement. Betamix, Betanex, Nortron SC and Progress can cause significant sugar beet injury. Refer to these product labels for crop injury precautions.]

#### NONCROP USES AROUND THE FARMSTEAD

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

# Weed Control and Trim-and-Edge

<u>Use instructions</u>: This product may be used to control annual weeds, perennial weeds and woody brush which are found in any part of the farmstead, including building foundations, along and in fences, in dry ditches and canals, along ditch banks, farm roads, shelterbelts, prior to landscape plantings and equipment storage areas.

Tank Mixture Partners: This product may be tank mixed with the following products. Refer to these product labels for approved farmstead sites and application rates. For annual weeds, use 22 fl. oz. per acre of this product when weeds are less than 6 inches tall, 32 fl. oz. per acre when weeds are 6 - 12 inches tall and 44 fl. oz. per acre when weeds are greater than 12 inches tall. For perennial weeds, apply 44 fl. oz. – 3.3 qts. per acre in these tank mixes. For tank mixtures with these products through backpack sprayers, handguns or other high-volume spray-to-wet applications, see the "ANNUAL WEEDS – HAND-HELD OR HIGH VOLUME EQUIPMENT" section of this label for specified rates.

Arsenal®
Banvel / Clarity
Barricade® 65WG
Diuron
Endurance®
Escort® XP

Karmex DF Krovar I DF

Oust® Pendulum® 3.3 EC

Pendulum WDG

Plateau<sup>®</sup>

Princep DF Princep 4L Ronstar<sup>®</sup> Sahara<sup>®</sup> DG Simazine

Surflan AS Specialty

Telar® DF Vanquish® 2,4-D

Do NOT apply this product plus dicamba or 2,4-D mixtures by air in California.

#### Greenhouse / Shade House

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

# **Chemical Mowing**

<u>Use instructions</u>: This product will suppress perennial grasses listed in this section to serve as a substitute for mowing. Use 4 fl. oz. of this product per acre when treating Kentucky bluegrass. Use 6 fl. oz. of this product per acre when treating tall fescue, fine fescue, orchardgrass, bahiagrass or quackgrass covers. Use 11 fl. oz. of this product per acre when treating bermudagrass. Use 44 fl. oz. of this product per acre when treating torpedograss or paragrass. Apply treatments in 10 - 20 gallons of spray solution per acre. Chemical mowing applications may be made along farm ditches and other parts of farmsteads. <u>Precautions</u>, <u>restrictions</u>: Use only in areas where some temporary injury or discoloration of perennial grasses can be tolerated.

#### **Cut Stumps**

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

<u>Use instructions</u>: This product will control regrowth of cut stumps and resprouts of many types of woody brush and tree species, some of which are listed below. Apply this product using suitable equipment to ensure coverage of the entire cambium. Cut trees or resprouts close to the soil surface. Apply a 50 - 100% solution of this product to the freshly cut surface immediately after cutting. Delays in application may result in reduced performance. For best results, applications must be made during periods of active growth and full leaf expansion.

Alder Eucalyptus Madrone

Reed, giant Saltcedar Sweetgum Oak Pepper, Brazilian Pine, Austrian Tanoak Willow

<u>Precautions, restrictions:</u> Do not make cut stump applications when the roots of desirable woody brush or trees may be grafted to the roots of the cut stump. Some sprouts, stems or trees may share the same root system. Adjacent trees having a similar age, height and spacing may signal shared roots. Whether grafted or shared, injury is likely to occur to non-treated stems / trees when one or more trees sharing common roots are treated.

# **Habitat Management**

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

#### **Habitat Restoration and Maintenance**

<u>Use instructions</u>: This product may be used to control exotic and other undesirable vegetation in habitat management areas. Applications can be made to allow recovery of native plant species, prior to planting desirable native species, and for similar broad-spectrum vegetation control requirements in habitat management areas. Spot treatments can be made to selectively remove unwanted plants for habitat maintenance and enhancement. The tank mixtures listed in this "NONCROP USES AROUND THE FARMSTEAD" section of this label may be used for habitat restoration and maintenance.

#### Wildlife Food Plots

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

# ANNUAL WEEDS RATE TABLE (Alphabetically by Species)

For water carrier volumes of 3 - 10 gallons per acre with ground applications and 3 - 5 gallons with aerial applications the following instructions are suggested:

- Apply to actively growing annual weeds.
- Annual weeds are easiest to control when they are small. Older, mature (hardened) annual weed species may require higher rates even if they meet the size requirements.
- Do not tank mix with soil residual herbicides when using these rates unless otherwise specified.
- For weeds that have been mowed, grazed or cut, allow regrowth to occur prior to treatment.
- This product may be used up to 44 fl. oz. per acre where heavy weed densities exist.

When water carrier volumes are between 16 and 40 gallons per acre for ground application, and between 6 and 15 gallons per acre for aerial application, the following use rates will control the annual weeds listed in the table that follows:

- 22 fl. oz. per acre-grass and broad leaf annual weeds, less than 6 inches in height circumference, and vines less than 3 inches in length.
- 32 fl. oz. per acre-grass and broadleaf annual weeds 6 to 12 inches in height circumference, and vines 3 to 6 inches in length.
- 44 fl. oz. per acre-grass and broad leaf annual weeds greater than 12 inches in height or circumference, and vines greater than 6 inches in length.

	Glyf	Glyfine K Plus Herbicide - fl. oz. per Acre						
WEED SPECIES	11	16	. 22	27	32			
	M	Maximum Height / Length (in inches)						
Ammannia, purple	3"	6"	12"	-	18"			
Annoda, spurred		2"	3"	5"	8"			
Barley	18"	18" +			-			
Barnyardgrass	- 10	3"	6"	7"	9"			

Bassia, fivehook	•	-	6"	-	-
Beggarweed, Florida		5"	8"	-	-
Bittercress	12"	20"	-	-	-
Bluegrass, annual	10"	-	•	-	-
Bluegrass, bulbous	6"	-	- 110		-
Brome, downy 1,2	6"	12"		- 5	-
Brome, Japanese	6"	12"	24"	-	-
Browntop panicum	6"	8"	12"	-	24"
Buckwheat, wild <sup>3</sup>	THE REAL PROPERTY.	1"	2"	- 8	-
Burcucumber		6"	12"	-	18"
Buttercup	12"	20"	-	-	-
Carolina geranium	-	-	4"	-	9"
Carpetweed		6"	12"	-	-
Cheat <sup>2</sup>	6"	20"	-	-	
Chervil	20"	-	-	100 E N	-
Chickweed	-	12"	18"		-
Cocklebur	12"	18"	24"		36"
		2"	4"	-	
Copperleaf, hophornbeam	-			-	6"
Copperleaf, Virginia	-	2"	4"	-	6"
Coreopsis, plains	-	6"	12"	-	18"
Corn, volunteer	6"	12"	20"	-	-
Corn speedwell	12"	-	-	-	-
Crabgrass	3"	6"	12"	-	-
Crowfootgrass		-	6"	-	12"
Cutleaf, evening primrose		-	3"		6"
Devilsclaw (unicorn plant)		3"	6"	-	-
Dwarfdandelion	12"	-		-	-
Eastern mannagrass	8"	12"		-	E
Eclipta		4"	8"	12"	-
Fall panicum	4"		6"	-	12"
Falsedandelion		20"	-	-	-
Falseflax, small seed	12"	-			677-
Fiddleneck	-	6"	12"	-	-
Field pennycress	6"	12"	-		
Filaree	-	12	6"		12"
	6"	20"		-	12
Fleabane, annual Fleabane, hairy			6"	-	10"
		-	0	-	10"
(Conyza bonariensis)	011	OII.	12"		
Fleabane, rough	3"	6"		-	-
Florida pusley	-	10"	4"	-	6"
Foxtail: giant, bristly, yellow	6"	12"	20"	-	-
Foxtail, Carolina	10"	-	-	-	-
Foxtail, green	12"	-	-	10 9/ -	- 1 A
Goatgrass, jointed	6"	12"	-	-	-
Goosegrass		3"	6"	-	12"
Grain sorghum (milo)	6"	12"	20"		-
Groundcherry		3"	6"	-	9"
Groundsel, common	-	6"	10"	1912	-
Hemp sesbania		2"	4"	6"	8"
Henbit	T - 1 - 1 - 1 - 1 - 1 - 1	-	6"	-	12"
Horseweed / Marestail <sup>6</sup>		6"	12"	-	18"
(Conyza canadensis)			12		10
	6"	8"	12"		18"
Itchgrass	0	-	12"	-	18"
Jimsonweed	- CII	10"		- 1	
Johnsongrass, seedling	6"	12"	18"	- 711	24"
Junglerice		3"	6"	7" .	9"
Knotweed		-	6"	-	12"
Kochia <sup>4</sup>	TOTAL TOTAL	3 - 6"	12"	-	-
Lambsquarters		6"	12"	-	20"
Little barley	6"	12"		-	
London rocket	6"		24"		-
Mayweed		2"	6"	12"	18"
Morningglory, annual		-	3"	-	6"

(Ipomoea spp.)	011	1011	1011		
Mustard, blue	6"	12"	18"	-	-
Mustard, tansy	6"	12"	18"	-	-
Mustard, tumble	6"	12"	18"		-
Mustard, wild	6"	12"	18"	-	-
Nightshade, black		4"	6"		12"
Nightshade, hairy		4"	6"	1-	12"
Oats	3"	6"	18"		-
Pigweed species	-	12"	18"	24"	-
Prickly lettuce		6"	12"	-	-
Purslane		-	3"	-	6"
Ragweed, common		6"	12"	3716-010	18"
Ragweed, giant	W - 12 - 12 - 12 - 12 - 12 - 12 - 12 - 1	6"	12"	-	18"
Red rice		-	4"		-
Russian thistle		6"	12"	-	-
Rye, volunteer / cereal 2	6"	18"	18+"		-
Ryegrass	-	-	6"		12"
Sandbur, field	6"	12"	-		12
Sandbur, longspine	6"	12"	-		-
Shattercane	6"	12"	20"	-	-
Shepherd's purse	6"	12"	-		-
Sicklepod	-	2"	4"		8"
Signalgrass, broadleaf		3"	6"	7"	9"
			6"		9"
Smartweed, ladysthumb		-	6"	-	9"
Smartweed, Pennsylvania	•	- /	6"	-	12"
Sowthistle, annual	-	-		-	
Spanishneedles	- 40"	-	6"	-	12"
Speedwell, purslane	12"	-	-	-	-
Sprangletop	6"	12"	20"		-
Spurge, prostrate		6"	12"	-	-
Spurge, spotted		6"	12"		-
Spurry, umbrella	6"	-	-	STIS-STE	-
Stinkgrass	- 4	12"	-	-	-
Sunflower	12"	18"	-		-
Swinecress	- T	5"	12"	-	-
Teaweed / Prickly sida		2"	4"	-	6"
Texas panicum	6"	8"	12"	-	24"
Thistle, Russian <sup>5</sup>	- 1	6"	12"	-	-
Velvetleaf	-	-	6"		12"
Virginia pepperweed	-	18"-		-	-
Waterhemp			6"		12"
Wheat <sup>2</sup>	6"	12"	18"		-
Wheat (overwintered)		6"	12"		18"
Wild oats	3"	6"	18"	10.1	-
Wild proso millet	-	6"	12"		18"
Witchgrass		12"	-		-
Woolly cupgrass		6"	12"	BEET STREET	
Yellow rocket		12"	20"		-

<sup>&</sup>lt;sup>1</sup> For control of downy brome in no-till systems, use 16 fl. oz. per acre.

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

<sup>&</sup>lt;sup>3</sup> Use 16 fl. oz. per acre of this product to control wild buckwheat in the cotyledon to 2-leaf stage. Use 22 fl. oz. per acre to control 2 - 4-leaf wild buckwheat. For improved control of wild buckwheat over 2 inches in size, use sequential treatments of 22 fl. oz. followed by 22 fl. oz. of this product per acre.

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

<sup>&</sup>lt;sup>5</sup> Control of Russian thistle may vary based on environmental conditions and spray coverage. Whenever possible, a tank mixture with 2,4-D as described below may improve control.

<sup>6</sup> For control of glyphosate resistant horseweed / marestail in cotton, corn and soybeans refer to "CONTROL AND MANAGEMENT OF GLYPHOSATE RESISTANT HORSEWEED (MARESTAIL, Conyza Canadensis) IN CORN, COTTON AN SOYBEANS" section below.

# Annual Weeds - Tank Mixture Partners with 2,4-D, Dicamba or Tordon™ 22K

Add 9 - 12 fl. oz. of this product plus 0.25 pound a.i. of dicamba or 0.5 pound a.i. of 2,4-D or 1 - 2 fl. oz. of Tordon 22K per acre to control the following weeds with maximum height or length indicated: 6" - prickly lettuce, marestail / horseweed (Conyza canadensis), morningglory (Ipomoea spp.), kochia (dicamba only), wild buckwheat (Tordon 22K only); 12" - cocklebur, lambsquarters, pigweed, Russian thistle (2,4-D only).

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

Refer to the specific product labels for crop rotation restrictions and cautionary statements of all products used in tank mixtures. Some crop injury may occur if dicamba or Tordon 22K is applied within 45 days of planting.

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

#### Annual Weeds - Hand-Held or Backpack Equipment

For control of weeds listed in the "ANNUAL WEEDS RATE TABLE", apply a 0.4% solution of this product to weeds less than 6 inches in height or runner length. Apply prior to seedhead formation in grass or bud formation in broadleaf weeds. For annual weeds over 6 inches tall, or unless otherwise specified, use a 0.7% solution.

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

When using application methods that result in less than complete coverage, use a 4% solution for annual and perennial weeds and a 4 - 7.5% solution for woody brush and trees.

Annual Weeds – Tank Mixture Partners with Atrazine for Fallow and Reduced Tillage Systems For use only in Colorado, Kansa, Nebraska, Oklahoma, Oregon, South Dakota and Washington – In Oregon and Washington, do not exceed 1 pound of atrazine per acre.

16 - 20 fl. oz. of this product plus 1 - 2 pounds of atrazine per acre will control the following weeds: Barnyardgrass (requires 20 fl. oz. for control), downy brome, green foxtail, lambsquarters, prickly lettuce, tansy mustard, pigweed, field sandbur, stinkgrass, Russian thistle, volunteer wheat, witchgrass and kochia (add 0.12 pound a.i. of dicamba for control).

Control and Management of Glyphosate Resistant Horseweed (Marestail, Conyza canadensis) in Corn, Cotton and Soybeans and Non-crop Areas

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

#### CORN

**Pre-plant, at-planting, pre-emergence:** Apply a tank mixture of this product (22 fl. oz. per acre) plus 2,4-D (0.5 pounds of a.i. per acre) before horseweed exceeds 6 inches in height. See the 2,4-D product label for time intervals that are required between application and planting.

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

Dicamba may be included in a tank mixture with this product. Refer to the dicamba product label for the time intervals that are required between application and planting and other geographic use restrictions.

In-crop (Corn hybrids with Roundup Ready 2 Technology including Roundup Ready Corn 2 and seed products displaying Roundup Ready 2 Technology logo): For in-crop use, apply a tank mixture of this product (22 fl. oz. per acre) plus Clarity (8 - 16 fl. oz. per acre) or 2,4-D (0.5 - 1.0 pounds a.i. per acre). Apply between corn emergence and the 5-leaf stage of growth (approximately 8 inches tall).

Dicamba may be included in a tank mixture with this product. Refer to the dicamba product label for the time intervals that are required between application and planting and other geographic use restrictions.

#### COTTON

**Pre-plant:** For control of horseweed, apply this product (22 fl. oz. per acre) in a tank mix with Clarity (8 fl. oz. per acre). This application must be made 21 - 35 days before planting and before horseweed reaches 6 inches in height. In order to avoid crop injury, a minimum interval of 21 days during which there is at least 1 inch of cumulative rainfall must be observed between Clarity application and planting of cotton.

2,4-D may be included in a tank mixture with this product. Refer to the 2,4-D product label for the time intervals that are required between application and planting and other geographic use restrictions.

Post-directed (Roundup Ready cotton varieties only and Roundup Ready Flex cotton):

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 pre-plant burndown and post-emergent over-the-top and/or directed applications of this product. These measures enhance the development of a height differential that is necessary to successfully make post-directed treatments. In-crop post-directed applications of MSMA (2 pounds a.i. per acre) tank mixed with diuron (0.5 - 0.75 pounds a.i. per acre) must be made when the temperature is 80°F or higher.

#### SOYBEANS

For best results, control horseweed prior to planting.

**Pre-plant:** Apply a tank mixture of this product (22 fl. oz. per acre) with 2,4-D (0.5 pounds a.i. per acre) before horseweed exceeds 6 inches in height. See the 2,4-D product label for time intervals that are required between application and planting. For areas where 2,4-D product cannot be applied due to application restrictions or proximity to a sensitive crop, contact your local retailer, distributor or State Agricultural Extension Service.

In-crop (Roundup Ready Soybean varieties only and Roundup Ready 2 Yield Soybean): It is strongly encouraged that horseweed be controlled prior to planting using specified pre-plant burndown treatments. For application in-crop to Roundup Ready soybeans, apply a tank mixture of this product (22 fl. oz. per acre) with Amplify (0.3 ounces per acre). This treatment is to be used as a salvage treatment only for a horseweed infestation that was not controlled pre-plant. Application must be made between full emergence of the first trifoliate leaf and 50% flowering stage of soybeans. At the time of treatment, horseweed must not exceed 6 inches in height.

#### Tree and Vine Crops

Orchards (Pome Fruit, Stone Fruit and Tree Nuts). Apply 44 fl. oz. of this product plus 2,4-D(18 fl. oz. per acre Dri-Clean® or 2 pints per acre Orchard Master® CA) before marestail exceeds 6 inches in height. A carrier volume of 15 gallons per acre is suggested. Follow labeling for the 2,4-D product with regard to directions for use, precautionary statements and applicable schedules. Further local restrictions may apply.

Vine crops (grapes only). Apply this product at 44 fl. oz. per acre plus 2,4-D (18 fl. oz. per acre Dri-Clean®) before marestail exceeds 6 inches in height. A carrier volume of 15 gallons per acre is suggested. Follow Dri-Clean® labeling in regard to directions for use, precautionary statements and applicable schedules. Further local restrictions may apply. In addition, residual herbicides such as diuron may provide additional preemergence control.

#### Non-crop Areas

Apply a tank mixture of this product (22 fl. oz. per acre) before horseweed exceeds 6 inches in

height. Control may be enhanced by making applications when horseweed in still in the rosette stage of growth. This product may be tank-mixed with the following products provided that the specific product is labeled for use on the target site. Refer to these product labels for approved sites and application rates. Read and carefully observe the cautionary statements and all other information appearing on the labels of all herbicides used. Use according to the most restrictive precautionary statements for each product in the mixture.

2,4-D¹ Krovar® I DF Milestone™ Transline® Crossbow™ L Landmark™ II MP Overdrive® Vanquish® dicamba¹ Landmark™ MP Telar™ DF Velpar® DF Gallery™75 DF

# PERENNIAL WEEDS RATE TABLE (Alphabetically by Species)

Apply to actively growing perennial weeds.

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

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

Unless otherwise stated, allow 7 or more days after application before tillage. Best results are obtained when soil moisture is adequate for active growth.

Weeds Species	Glyfine™ K Plus Herbicide (Qts./A)	Water Volume (GPA)	Hand-Held % Solution	COMMENTS
Alfalfa	1 - 1.5	3 - 10	1.5%	Make applications after the last hay cutting in the fall. Allow alfalfa to regrow to a height of 6 - 8 inches or more prior to treatment.  Applications must be followed with deep tillage at least 7 days after treatment, but before soil freeze-up.
Alligatorweed	3	3 - 20	1%	Partial control. Apply when most of the plants are in bloom. Repeat applications will be required to maintain control.
Anise (fennel)	-	- 1	1 - 1.5%	Apply as a spray-to-wet treatment. Optimum results are obtained when plants are treated at the bud to full-bloom stage of growth.
Bahiagrass	2-3.3	3 - 20	1.5%	Apply when most plants have reached the early head stage.
Bentgrass	1	10 - 20	1.5%	For suppression in grass seed production areas. For ground applications only. Ensure entire crown area has resumed growth prior to a fall application. Bentgrass must have at least 3 inches of growth. Tillage prior to treatment must be avoided. Tillage 7 - 10 days after application is suggested for best results.
Bermudagrass	2 - 3.3	3 - 20	1.5%	For control, apply 3.3 qts. of this product per acre. For partial control, apply 64 fl. oz. per acre. Treat when bermudagrass is actively growing and seedheads are present. Retreatment may be necessary to maintain control.
Bermudagrass, water (knotgrass)	0.7 - 1	5 - 10	1.5%	Apply 22 fl. oz. of this product in 5 - 10 gallons of water per acre. Apply when water bermudagrass is 12 - 18 inches in length.

<sup>&</sup>lt;sup>1</sup> Tank mixtures with products containing this generic active ingredient may be made provided the specific product is labeled for application on the use site.

				Allow 7 or more days before tilling, flushing or flooding the field.  Fall applications only: Apply 22 fl. oz. of this product in 5 - 10 gallons of water per acre.  Fallow fields must be tilled prior to application.  Apply prior to frost on water bermudagrass that is 12 - 18 inches in length.  This product is not registered in California for
Bindweed, field	0.4 – 3.3	3 - 20	1.5%	use on water bermudagrass  Do not treat when weeds are under drought stress as good soil moisture is necessary for active growth.  For control, apply 2.5 – 3.3 qts. of this product per acre west of the Mississippi River and 2 – 2.5 qts. east of the Mississippi River. Apply when weeds are at or beyond full bloom. For best results, apply in late summer or fall. Fall treatments must be applied before a killing
				frost.  Also for control, apply 44 fl. oz. of this product plus 0.5 pound a.i. of dicamba in 10 - 20 gallons of water per acre. Do not apply by air.  For suppression on irrigated agricultural land, apply 22 - 44 fl. oz. of this product plus 1 pound a.i. of 2,4-D in 10 - 20 gallons of water per acre with ground equipment only. Applications must be made following harvest or in fall fallow ground when the bindweed is actively growing and the majority of runners are 12 inches or more in length. The use of at least one irrigation will promote active bindweed growth.
				For suppression, apply 11 fl. oz. of this product plus 0.5 pound a.i. of 2,4-D in 3 - 10 gallons of water per acre for ground applications and 3 - 5 gallons of water per acre for aerial applications. Apply by air in fallow and reduced tillage systems only. Applications must be delayed until maximum emergence has occurred and when vines are between 6 - 18 inches in length.  In California only, apply 22 fl. oz. – 3.3 qts. 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 22 fl. oz. of this product in 3 - 10 gallons of water per acre. Apply to bindweed that has reached a length of 12 inches or greater. Allow a maximum weed emergence and runner growth. Allow 3 or more days after application before tillage.
Bluegrass, Kentucky	0.7 -1.5	3 - 40	1.5%	Apply 44 fl. oz. of this product in 10 - 40 gallons of water per acre when most plants have reached boot to early seedhead development. For partial control in pasture or hay crop renovation, apply 22 – 32 fl. oz. of this product in 3 - 10 gallons of water per acre. Apply to actively growing plants when most

				have reached 4 - 12 inches in height.
Blueweed, Texas	2 - 3.3	3 - 40	1.5%	Apply 2 – 3.3 qts. of this product per acre west of the Mississippi River and 2 – 2.5 qts. per acre east of the Mississippi River. Apply when plants are at or beyond full bloom. New leaf development indicates active growth. For best results, apply in late summer or fall. Fall treatments must be applied before a killing frost.
Brackenfern	2-3	3 - 40	1%	Apply to fully expanded fronds which are least 18 inches long.
Bromegrass, smooth	0.7 - 1.5	3 - 40	1.5%	Apply 44 fl. oz. of this product in 10 - 40 gallons of water per acre when most plants have reached boot to early seedhead stage of development. For partial control in pasture or hay crop renovation, apply 22 – 44 fl. oz. of this product in 3 - 10 gallons of water per acre. Apply to actively growing plants when most have reached 4 - 12 inches in height.
Bursage, woolly- leaf	-	3 - 20	1.5%	For control, apply 44 fl. oz. of this product plus 0.5 pound a.i. of dicamba per acre. For partial control, apply 22 fl. oz. of this product plus 0.5 pound a.i. of dicamba per acre. Apply when plants are producing new active growth which has been initiated by moisture for at least 2 weeks and when plants are at or beyond flowering.
Canarygrass, reed	1.5 - 2	3 - 40	1.5%	For best results, apply when most plants have reached the boot to head stage of growth.
Cattail	2 - 3.3	3 - 40	1.5%	Apply when most plants have reached the early head stage.
Clover; red, white	2 - 3.3	3 - 20	1.5%	Apply when most plants have reached the early bud stage. Also for control, apply 11 - 22 fl. oz. of this product plus 0.5 - 1 pound a.i. of 2,4-D in 3 - 10 gallons of water per acre.
Cogongrass	2 - 3.3	10 - 40	1.5%	Apply when cogongrass is at least 18 inches tall in late summer or fall. Due to uneven stages of growth and the dense nature of vegetation preventing good spray coverage, repeat treatments may be necessary to maintain control.
Dallisgrass	2 - 3.3	3 - 20	1.5%	Apply when most plants have reached the early head stage.
Dandelion	2 - 3.3	3 - 40	1.5%	Apply when most plants have reached the early bud stage.
				Also for control, apply 11 fl. oz. of this product plus 0.5 pound a.i. of 2,4-D in 3 - 10 gallons of water per acre.
Dock, curly	2 - 3.3	3 - 40	1.5%	Apply when most plants have reached the early bud stage of growth.  Also for control, apply 11 - 22 fl. oz. of this product plus 0.5 - 1 pound a.i of 2,4-D in 3 - 10 gallons of water per acre.
Dogbane, hemp	3	3 - 40	1.5%	Apply when most plants have reached the late bud to flower stage of growth. Following crop harvest or mowing, allow weeds to regrow to a mature stage prior to treatment. For best results, apply in late summer or fall. For suppression, apply 11 fl. oz. of this product plus 0.5 pound a.i. of 2,4-D in 3 - 10 gallons of water per acre for ground applications and 3 - 5 gallons of water per acre for aerial applications. Delay applications until maximum

Fescue (except	2 - 3.3	3 - 20	1.5%	emergence of dogbane has occurred.  Apply when most plants have reached the
tall) Fescue, tall	0.7 - 2	3 - 40	1.5%	early head stage.  Apply 64 fl. oz. of this product per acre when most plants have reached boot to early seedhead stage of development.
				Fall applications only: Apply 22 fl. oz. of this product in 3 - 10 gallons of water per acre. Apply to fescue in the fall when plants have 6 - 12 inches of new growth. A sequential application of 11 fl. oz. per acre of this product will improve long-term control and control of seedlings germinating after fall treatments or the following spring.
Guineagrass	1.5 - 2	3 - 40	1%	Apply when most plants have reached at least the 7-leaf stage of growth. Ensure thorough coverage when using hand-held equipment. In Texas and the ridge of Florida, use 44 fl. oz. for control. In the flatwoods region of Florida, 64 fl. oz. is required.
Horsenettle	2 - 3.3	3 - 20	1.5%	Apply when most plants have reached the early bud stage.
Horseradish	3	3 - 40	1.5%	Apply when most plants have reached the late bud to flower stage of growth. For best results, apply in late summer or fall.
Iceplant	-	-	1.5 – 2%	Iceplant must be at or beyond the early bud stage of growth. Thorough coverage is necessary for best control.
Jerusalem artichoke	2 - 3.3	3 - 20	1.5%	Apply when most plants are in the early bud stage.
Johnsongrass	0.4-2	3 - 40	.1%	In annual cropping systems apply 22 - 44 fl. oz. of this product in 3 - 10 gallons of water per acre. Use 44 fl. oz. of this product when applying 10 - 40 gallons of water per acre. In noncrop, or areas where annual tillage (no-till) is not practiced, apply 44 - 64 fl. oz. of this product in 10 - 40 gallons of water per acre.
				For best results, apply when most plants have reached boot to head stage of growth or in the fall prior to frost. Allow 7 or more days after application before tillage. Do not tank mix with residual herbicides when using 22 fl. oz. per acre.
				For burndown of Johnsongrass, apply 11 fl. oz of this product in 3 - 10 gallons of water per acre before the plants reach a height of 12 inches. For this use, allow at least 3 days after treatment before tillage.
				Spot treatment (partial control or suppression) Apply a 0.7% solution of this product when Johnsongrass is 12 - 18 inches in height. Coverage must be uniform and complete.
Kikuyugrass	1.5 – 2	3 - 40	1.5%	Spray when most kikuyugrass is at least 8 inches in height (3- or 4-leaf stage of growth). Allow 3 or more days after application before tillage.
Knapweed	3	3 - 40	1.5%	Apply when most plants have reached the late bud to flower stage of growth. For best results, apply in late summer or fall.
Lantana	-	-	1%	Apply at or beyond the bloom stage of growth. Use the higher application rate for plants that

				have reached the woody stage of growth.
Lespedeza	2-3.3	3 - 20	1.5%	Apply when most plants have reached the early bud stage.
Milkweed (common)	2	3 - 40	1,5%	Apply when most plants have reached the late bud to flower stage of growth.
Muhly, wirestem	0.7 - 1.5	3 - 40	1.5%	Use 22 fl. oz. of this product in 3 - 10 gallons or water per acre. Use 44 fl. oz. of this product when applying 10 - 40 gallons of water per acre or in pasture, sod or noncrop areas. Spray when the wirestem muhly is 8 inches or more in height. Do not till between harvest and fall applications or in the fall or spring or prior to spring applications. Allow 3 or more days after application before tillage.
Mullein, common	2-3.3	3 - 20	1.5%	Apply when most plants are in the early bud stage.
Napiergrass	2-3.3	3 - 20	1.5%	Apply when most plants are in the early head stage.
Nightshade, silverleaf	1.5	3 - 10	1.5%	Applications must be made when at least 60% of the plants have berries. Fall treatments must be applied before a killing frost.
Nutsedge; purple, yellow	0.4 – 2	3 - 40	1.0 – 1.5%	Apply 64 fl. oz. of this product per acre or apply a 1 - 1.5% solution for control of nutsedge plants and immature nutlets attached to treated plants. Treat when plants are in flower or when new nutlets can be found at rhizome tips. Nutlets which have not germinated will not be controlled and may germinate after treatment. Repeat treatments will be required for long-term control of ungerminated tubers.
				Sequential applications: 22 - 44 fl. oz. of this product in 3 - 10 gallons of water per acre will also provide control. Make applications when a majority of the plants are in the 3- to 5-leaf stage (less than 6 inches tall). Repeat this application, as necessary, when newly emerging plants reach the 3- to 5-leaf stage. Subsequent applications will be necessary for long-term control.
				For partial control of existing plants, apply 11 - 44 fl. oz. of this product in 3 - 40 gallons of water per acre. Treat when plants have 3 - 5 leaves and most are less than 6 inches tall. Repeat treatments will be required to control subsequent emerging plants or regrowth of existing plants.
Orchardgrass	0.7 - 1.5	3 - 40	1.5%	Apply 44 fl. oz. of this product in 10 - 40 gallons of water per acre when most plants have reached boot to early seedhead stage of development. For partial control in pasture or hay crop renovation, apply 22 – 32 fl. oz. of this product in 3 - 10 gallons of water per acre. Apply to actively growing plants when most have reached 4 - 12 inches in height.  Orchardgrass sods going to no-till corn: Apply 22 – 32 fl. oz. of this product in 3 - 10 gallons of water per acre. Apply to orchardgrass that is a minimum of 12 inches tall for spring applications and 6 inches tall for fall applications. Allow at least 3 days following application before planting. A sequential

				application of atrazine will be necessary for optimum results.
Pampasgrass	-	-	1 - 1.5%	Pampasgrass must be at or beyond the boot stage of growth. Thorough coverage is necessary for best control.
Paragrass	2-3.3	3 - 20	1.5%	Apply when most plants are in the early head stage.
Phragmites	2-3.3	10 - 40	1 – 1.5%	For partial control. For best results, treat during late summer or fall when plants are actively growing and in full bloom. Treatment before or after this stage may lead to reduced control. Due to the dense nature of the vegetation, which may prevent good spray coverage or uneven stages of growth, repeat treatments may be necessary to maintain control. Visible
Daissan hamilank			1 – 1.5%	control symptoms will be slow to develop.
Poison hemlock	-	-	1 – 1.5%	Apply as a spray-to-wet treatment. Optimum results are obtained when plants are treated at the bud to full-bloom stage of growth.
Pokeweed, common	1	3 - 40	1.5%	Apply to actively growing plants up to 24 inches tall.
Quackgrass	0.7 - 2	3 - 40	1.5%	In annual cropping systems, or in pastures and sods followed by deep tillage: Apply 22 fl. oz. of this product in 3 - 10 gallons of water per acre. For 10 - 40 gallons of water per acre, apply 44 fl. oz. of this product. Do not tank mix with residual herbicides when using 22 fl. oz. rate. Spray when quackgrass is 6 - 8 inches in height. Do not till between harvest and fall applications or in fall or spring prior to spring application. Allow 3 or more days after application before tillage. In pastures or sods, use a moldboard plow for best results.  In pastures, sods or noncrop areas where deep tillage does not follow application: Apply 44 - 64 fl. oz. of this product in 10 - 40 gallons of water per acre when quackgrass is greater
Redvine	0.5 – 1.5	5 - 10	1.5%	than 8 inches tall.  For suppression, apply 18 fl. oz. of this product per acre at each of two applications 7 - 14 days apart or a single application of 44 fl. oz. per acre. Apply specified rates in 5 - 10 gallons of water per acre. Apply in late September or early October to plants that are at least 18 inches tall and have been growing 45 - 60 days since the last tillage operation. Make applications at least 1 week before a killing frost.
Reed, giant		-	1.5%	Best results are obtained when applications are made in the late summer to fall.
Ryegrass, perennial	0.7-2	3 - 40	1%	In annual cropping systems apply 22 - 44 fl. oz. of this product per acre. Apply 22 fl. oz. of this product in 3 - 10 gallons of water per acre. Use 44 fl. oz. of this product in 10 - 40 gallons of water per acre. In noncrop, or areas where annual tillage is not practiced (no-till), apply 44 64 fl. oz. of this product in 10 - 40 gallons of water per acre.  For best results, apply when most plants have reached the boot to head stage of growth or in the fall prior to frost. Do not tank mix with residual herbicides when using 22 fl. oz. per

Smartweed, swamp	2-3.3	3 - 40	1.5%	Apply when most plants have reached the early bud stage of growth. Also for control, apply 11 fl. oz. of this product plus 0.5 pound a.i. of 2,4-D in 3 - 10 gallons of water per acre in the late summer or fall.
Sowthistle, perennial	1.5 – 2	3 - 40	1.5%	Apply when most plants are at or beyond the bud stage of growth. After harvest, mowing or tillage in the late summer or fall, allow at least 4 weeks for initiation of active growth and rosette development prior to application of this product. Fall treatments must be applied before a killing frost. Allow 3 or more days after application before tillage.
Spurge, leafy		3 - 10	1.5%	For suppression, apply 11 fl. oz. of this product plus 0.5 pound a.i. of 2,4-D in 3 - 10 gallons of water per acre in the late summer or fall. If mowing has occurred prior to treatment, apply when most of the plants are 12 inches tall.
Starthistle, yellow	1.5	10 - 40	1.5%	Best results are obtained when applications are made during the rosette, bolting and early flower stages.
Sweet potato, wild	- 15	-	1.5%	Partial control. Apply to plants that are at or beyond the bloom stage of growth. Repeat applications may be required.
Thistle, artichoke	7	-	1.5%	Partial control. Apply to plants that are at or beyond the bloom stage of growth. Repeat applications may be required.
Thistle, Canada	1.5 - 2	3 - 40	1.5%	Apply when most plants are at or beyond the bud stage of growth. After harvest, mowing or tillage in the late summer or fall, allow at least 4 weeks for initiation of active regrowth and rosette development prior to the application of this product. Fall treatments must be applied before a killing frost. Allow 3 or more days after application before tillage.
				For suppression in spring, apply 22 fl. oz. of this product, or 11 fl. oz. of this product plus 0.5 pound a.i. of 2,4-D, in 3 - 10 gallons of water per acre. Allow rosette regrowth to a minimum of 6 inches in diameter before treating. Applications can be made as long as leaves are still green and plants are actively growing at the time of application. Allow 3 or more days after application before tillage.
Timothy	1.5 – 2	3 - 40	1.5%	For best results, apply when most plants have reached the boot to head stage of growth.
Torpedograss	2.5 – 3.3	3 - 40	1.5%	For partial control. Apply when most plants are at or beyond the seedhead stage of growth. Repeat applications will be required to maintain control. Fall treatments must be applied before frost.
Trumpet creeper	1.5	5 - 10	1.5%	Partial control. Apply in late September or October, to plants that are at least 18 inches tall and have been growing 45 - 60 days since the last tillage operation. Make applications at least 1 week before a killing frost.
Vaseygrass	2 - 3.3	3 - 20	1.5%	Apply when most plants are in the early head stage.
Velvetgrass	2 - 3.3	3 - 20	1.5%	Apply when most plants are in the early head stage.
Wheatgrass, western	1.5 - 2	3 - 40	1.5%	For best results, apply when most plants have reached the boot to head stage of growth.

#### WOODY BRUSH AND TREES RATE TABLE

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

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

Unless otherwise listed below, apply broadcast treatments in 3-40 gallons of water per acre. Ensure thorough coverage when using hand-held equipment. Symptoms may not appear prior to frost or senescence with fall treatments.

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

Weeds Species	Glyfine™ 5 Plus Herbicide (Qts./A)	Hand-Held % Solution	COMMENTS
Alder	2-3	1%	
Ash	1.5 - 3.3	1 - 1.5%	Partial control
Aspen, quaking	1.5-2	1%	
Bearmat (Bearclover)	1.5 – 3.3	1 – 1.5%	Partial control
Beech	1.5 - 3.3	1 - 1.5%	Partial control
Birch	1.5 – 2	1%	
Blackberry	2-3	1%	For control, make applications after plants have reached full leaf maturity. Best results are obtained when applications are made in late summer or fall. Applications may also be made after leaf drop and until a killing frost or as long as stems are green. After berries have set or dropped in late fall, blackberry can be controlled by applying a 0.7% solution of this product. For control of blackberries after leaf drop and until killing frost or as long as stems are green, apply 2 – 2.5qts. of this product in 10 - 40 gallons of water per acre.
Blackgum	1.5 – 3.3	1 1.5%	
Bracken	1.5 - 3.3	1 - 1.5%	
Broom: French, Scotch	-	1 - 1.5%	
Buckwheat, California		1 - 1.5%	For partial control, thorough coverage of foliage is necessary for best results.
Cascara	1.5 - 3.3	1 - 1.5%	Partial control
Catsclaw	-	1%	Partial control
Ceanothus	1.5 – 3.3	1 - 1.5%	Partial control
Chamise	<del>-</del>	1%	For control, thorough coverage of foliage is necessary for best results.
Cherry: bitter, black, pin	1.5 – 2	1%	
Coyote brush		1 - 1.5%	For control, apply when at least 50% of the new leaves are fully developed.
Dogwood	1.5 – 3.3	1 - 1.5%	Partial control
Elderberry	1.5-2	1%	

Elm	1.5 - 3.3	1 - 1.5%	Partial control
Eucalyptus	-	1.5%	For control of eucalyptus resprouts, apply when resprouts are 6 - 12 feet tall. Ensure complete coverage. Avoid application to drought-stressed plants.
Florida holly (Brazilian	1.5 – 3.3	1 - 1.5%	Partial control
peppertree)			
Gorse	1.5 – 3.3	1 - 1.5%	Partial control
Hazardia		1 - 1.5%	Partial control, thorough coverage of foliage is necessary for best results.
Hawthorn	1.5-2	1%	2. 对于特别的 1. 2017年 10.1018 11.1
Hazel	1.5-2	1%	
Hickory	1.5 - 3.3	1 - 1.5%	Partial control
Honeysuckle	2-3	1 - 1.5%	
Hornbeam, American	1.5 – 3.3	1 - 1.5%	Partial control
Kudzu	2.5 – 3.3	1.5%	For control, repeat applications may be required to maintain control.
Locust, black	1.5 – 3	1 - 1.5%	Partial control
Madrone resprouts	1	1.5%	Partial control, apply to resprouts that are 3 - 6 feet tall. Best results are obtained
Managara	45.00	4 4 500	with spring or early summer treatments.
Manzanita	1.5 – 3.3	1 - 1.5%	Partial control
Maple, red	1.5 – 3	1%	For control, apply a 1% solution when at least 50% of the new leaves are fully developed. For partial control, apply 44 – 86 fl. oz. of this product per acre.
Maple, sugar	-	1%	For control, apply when at least 50% of the new leaves are fully developed.
Monkey flower	-	1 - 1.5%	Partial control, thorough coverage of foliage is necessary for best results.
Oak; black, white	1.5 – 3	1 - 1.5%	Partial control
Oak, post	2-3	1%	
Oak; northern, pin		1%	For control, Apply when at least 50% of the new pin leaves are fully developed.
Oak, southern red	1.5 – 2	1%	
Persimmon	1.5 - 3.3	1 - 1.5%	Partial control
Pine	1.5 - 3.3	1 - 1.5%	
Poison ivy / Poison oak	2.5 – 3.3	1.5%	For control, repeat applications may be required to maintain control. Fall treatments must be applied before leaves lose green color.
Poplar, yellow	1.5 - 3.3	1 - 1.5%	Partial control
Redbud, eastern	1.5 – 3.3	1 - 1.5%	
Rose, multiflora	1.5	1%	For control, treatments must be made prior to leaf deterioration by leaf-eating insects.
Russian olive	1.5 – 3.3	1 - 1.5%	Partial control
Sage, black		1%	For control, thorough coverage of foliage is necessary for best results.
Sage, white	1.5 – 3.3	1 - 1.5%	Partial control
Sagebrush, California	i de Televisi	1%	For control, thorough coverage of foliage is necessary for best results.
Salmonberry	1.5-2	1%	
Saltcedar	1.5 - 3.3	1 - 1.5%	
Sassafras	1.5 – 3.3	1 - 1.5%	Partial control
Sourwood	1.5 – 3.3	1 - 1.5%	Partial control
Sumac; poison, smooth, winged	1.5 – 3	1 - 1.5%	Partial control
Sweetgum	1.5-2	1%	

Swordfern	1.5 - 3.3	1 - 1.5%	Partial control
Tallowtree, Chinese		1%	For control, thorough coverage of foliage is necessary for best results.
Tanoak resprouts	-	1.5%	For partial control, apply to resprouts that are less than 3 - 6 feet tall. Best results are obtained with fall applications.
Thimbleberry	1.5-2	1%	
Tobacco, tree		1 - 1.5%	Partial control
Trumpet creeper	1.5 – 2	1%	
Vine maple	1.5 - 3.3	1 - 1.5%	Partial control
Virginia creeper	1.5 - 3.3	1 - 1.5%	
Waxmyrtle, southern	1.5 – 3.3	1 - 1.5%	Partial control
Willow	2-3	1%	

#### STORAGE AND DISPOSAL

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

Pesticide Storage: Store pesticides away from food, pet food, feed, seed, fertilizers, and veterinary supplies. Keep container closed to prevent spills and contamination. Store above 10°F (-12°C) to keep product from crystallizing. Crystals will settle to the bottom. If allowed to crystallize, place in a warm room 68°F (20°C) for several days to redissolve and roll or shake container or recirculate in mini-bulk or bulk container to mix well before using. [Note to EPA Reviewer. This is standard precautionary language for a typical glyphosate salt product if crystallization occurs]

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

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

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

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

Nonrefillable container equal to or less than 5 gallons. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling if available or reconditioning, or puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

Nonrefillable container greater than 5 gallons. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container ¼ full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. Then offer for recycling if available or reconditioning, or puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

Refillable container. Refill this container with pesticide only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10 % full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times. Then offer for recycling if available or reconditioning, or puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

#### CONDITIONS OF SALE AND WARRANTY

#### IMPORTANT: READ BEFORE USE

Read the entire Directions for Use, Conditions, Disclaimer of Warranties and Limitations of Liability before using this product. If terms are not acceptable, return the unopened product container at once.

By using this product, user or buyer accepts the following Conditions, Disclaimer of Warranties and Limitations of Liability.

**CONDITIONS**: The directions for use of this product are believed to be adequate and must be followed carefully. However, it is impossible to eliminate all risks associated with the use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as weather

conditions, presence of other materials, or the manner of use or application, all of which are beyond the control of Aceto Agricultural Chemicals Corporation. To the extent consistent with applicable law all such risks shall be assumed by the user or buyer.

DISCLAIMER OF WARRANTIES: To the extent consistent with applicable law, ACETO AGRICULTURAL CHEMICALS CORPORATION MAKES NO OTHER WARRANTIES, EXPRESS OR IMPLIED, OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE OR OTHERWISE, THAT EXTEND BEYOND THE STATEMENTS MADE ON THIS LABEL. No agent of Aceto Agricultural Chemicals Corporation is authorized to make any warranties beyond those contained herein or to modify the warranties contained herein. To the extent consistent with applicable law, ACETO AGRICULTURAL CHEMICALS CORPORATION DISCLAIMS ANY LIABILITY WHATSOEVER FOR SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT.

LIMITATIONS OF LIABILITY: To the extent consistent with applicable law, THE EXCLUSIVE REMEDY OF THE USER OR BUYER FOR ANY AND ALL LOSSES, INJURIES OR DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT, WHETHER IN CONTRACT, WARRANTY, TORT, NEGLIGENCE, STRICT LIABILITY OR OTHERWISE, SHALL NOT EXCEED THE PURCHASE PRICE PAID, OR AT ACETO AGRICULTURAL CHEMICALS CORPORATION'S ELECTION, THE REPLACEMENT OF PRODUCT.

Glyfine and Halomax 75 are trademarks of the Aceto Agricultural Chemicals Corporation All trademarks are proprietary of their respective owners.