GLYPHOSATE GROUP 9

**HERBICIDE** 

# 

A broad-spectrum postemergence herbicide for weed control in many agricultural systems, in Glyphosate resistant crops and for industrial, turf, ornamental, and terrestrial including forestry, roadside, utility rights-of-way weed control.

AVOID CONTACT OF THIS HERBICIDE WITH FOLIAGE, GREEN STEMS, EXPOSED NON-WOODY ROOTS OR FRUIT OF CROPS, DESIRBLE PLANTS AND TREES, EXCEPT AS DIRECTED FOR USE ON GLYPHOSATE RESISTANT CROPS, AS SEVERE PLANT INJURY OR DESTRUCTION COULD RESULT.

# **ACTIVE INGREDIENT:**

\*Glyphosate potassium salt: 48.7% OTHER INGREDIENTS: 51.3% 100.0%

\*Contains 660 grams of the active ingredient glyphosate potassium salt per liter or 5.5 pounds per U.S. gallon, which is equivalent to 540 grams of the glyphosate acid, per liter or 4.5 pounds per U.S. gallon (39.8% by weight).

# KEEP OUT OF REACH OF CHILDREN CAUTION

# **FIRST AID** IF SWALLOWED • Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give anything by mouth to an unconscious person. IF ON SKIN OR • Take off contaminated clothing. **CLOTHING** • Rinse skin immediately with plenty of water for 15 to 20 minutes. • Call a poison control center or doctor for treatment advice.

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You can also call (800) 222-1222, day or night, for emergency medical treatment information.

See label booklet for additional Precautionary Statements, complete Directions for Use, and Storage and Disposal instructions. Read the entire label before using this product. Use only according to label directions.

### **Manufactured For:**

Willowood Glyphosate, LLC 1887 Whitney Mesa Drive, Suite 9740 Henderson, NV 89014-2069 20210723

EPA Reg. No. 92474-7

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# 3.0 PRECAUTIONARY STATEMENTS

# 3.1 Hazards to Humans and Domestic Animals

# CAUTION

Harmful if swallowed. Harmful if absorbed through skin.

Avoid contact with skin, eyes, or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet. Wear long-sleeved shirt and long pants, socks, shoes, and waterproof gloves. Remove and wash contaminated clothing before reuse.

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

# **Personal Protective Equipment (PPE)**

Applicators and other handlers must wear: long-sleeved shirt and long pants, socks and shoes, and waterproof gloves

Follow manufacturer's instructions for cleaning/maintaining PPE (Personal Protective Equipment). If there are no instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

# **Engineering Controls**

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

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:

- · Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- · Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

# 3.2 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 wash waters and rinsate.

# 3.3 Physical or Chemical Hazards

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

DO NOT MIX OR ALLOW TO COME IN CONTACT WITH OXIDATION AGENTS. A HAZARDOUS CHEMICAL RECTION MAY OCCUR. 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 can form a highly combustible gas mixture. This gas mixture could flash or explode if ignited by open flame, spark, welder's torch, lighted cigarette, or other ignition source and cause serious personal injury.

# **DIRECTIONS FOR USE**

It is a violation of Federal law to use this product in any manner inconsistent with its labeling. This product may only be used in accordance with the Directions for Use on this label.

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 regulation.

# **Agricultural Use Requirements**

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

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

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

### **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.

# 4.0 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. See individual container label for additional storage conditions, if any.

**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.

### **CONTAINER HANDLING:**

Nonrefillable rigid container less than or equal to 5 gallons: Do not reuse this container. Offer for recycling if available. Triple rinse or pressure rinse (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or mix-tank and continue to 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 mix-tank, or store rinsate for later use or disposal. Continue to drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer the container for recycling, if available. Once properly rinsed, some plastic pesticide containers can be taken to a container collection site or picked up for recycling. If recycling is not available, dispose of in accordance with federal, state, and local regulations and procedures, which may include puncturing the properly rinsed container and disposing in a sanitary landfill.

Nonrefillable rigid container greater than 5 gallons: Do not reuse this container. Offer for recycling if available. Triple rinse or pressure rinse (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or mix-tank. Fill the container ¼ full with water. Replace and tighten closures. Tip the container on its side and roll it back and forth for 30 seconds, ensuring at least one complete revolution. 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 mix-tank, or store rinsate for later use or disposal. Repeat this procedure two more times. Then offer the container for recycling, if available. Once properly rinsed, some plastic pesticide containers can be taken to a container collection site or picked up for recycling. If recycling is not available, dispose of in accordance with federal, state, and local regulations and procedures, which may include puncturing the properly rinsed container and disposing in a sanitary landfill.

Pressure rinse as follows (all sizes): Empty the remaining contents into application equipment or mix-tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle into the side of the container and rinse at about 40 PSI for at least 30 seconds. Continue to drain for 10 seconds after the flow begins to drip.

**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 the container into application equipment or mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing process two more times. Then offer this container for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by incineration, or if allowed by state and local authorities, by burning. If burned, stay out of smoke.

# 5.0 PRODUCT INFORMATION

**Product Description:** This product is a post emergence, systemic herbicide with no soil residual activity. It is non-selective and gives broad-spectrum control of many annual and perennial weeds, woody brush, trees, and vines. It is formulated as a water-soluble liquid containing surfactant and may be applied using standard and specialized pesticide application equipment after dilution and thorough mixing with water or other carrier according to label directions.

Ammonium sulfate, drift control additives, or dyes and colorants may be used. See the "MIXING" section of this label for instructions.

**Time to Symptoms:** This product moves through the plant from the point of foliage contact to and into the root system. Visible effects are a gradual wilting and yellowing of the plant that advances to complete browning of aboveground growth and deterioration of underground plant parts. Effects are visible on most annual weeds within 2 to 4 days, but on most perennial weeds, effects might not be visible for 7 or more days after application. Extremely cool or cloudy weather following application could slow activity of this product and delay development of visual symptoms.

Stage of Weeds: Annual weeds are easiest to control when they are small. Control of most perennial weeds is obtained when this product is applied at late growth stages approaching maturity. Refer to the "ANNUAL WEEDS RATE TABLE," "PERENNIAL WEEDS RATE TABLE" and "WOODY BRUSH AND TREES RATE TABLE" for more information on the control of specific weeds.

Always use a higher product application rate within the specified range when weed growth is heavy or dense, or when weeds are growing in an undisturbed (non-cultivated) area. Reduced weed control could also result when this product is applied to weeds that show signs of disease or insect damage, are covered with dust, or are surviving under poor growing conditions.

**Cultural Considerations:** Reduced weed control could result when this product is applied to annual or perennial weeds that have been mowed, grazed, or cut, and have not been allowed to re-grow prior to application.

**Rain fastness:** Rainfall within 4 hours of application could wash this product off of the foliage and a second application might then be needed for acceptable weed control. Refer to specific use sections of this label for additional information on the minimum intervals required before re-application of this product.

Spray Coverage: Spray coverage must be uniform. Do not spray foliage to the point of runoff.

**No Soil Activity:** This product binds tightly to soil particles and does not provide residual weed control. Weeds must be emerged at the time of application to be controlled by foliar application of this product. Weed seeds in the soil will not be affected by this product and will continue to germinate. Unattached plant rhizomes and root stocks beneath the soil surface will also not be affected by this product.

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

**Tank Mixing:** This product does not provide residual weed control. For subsequent residual weed control, follow a label approved herbicide program. Read and carefully observe the cautionary statements and all other information appearing on the labels of all herbicides used. Use according to the most restrictive label directions for each product in the mixture.

Mixing this product with herbicides or other materials not recommended on this label may result in reduced performance.

**Maximum Application Rates:** Unless otherwise specified on this label, the combined total application of this product on a site must not exceed 170 fluid ounces (6.0 lbs. a.e.) per acre per year. For applications on non-crop sites, or on tree, vine or shrub crop production sites, the combined total application of this product must not exceed 224 fluid ounces (8 lbs. a.e.) per acre per year.

The maximum application or use rates stated throughout this label are given in units of volume (fluid ounces) of this product per acre. However, the maximum allowable application rates apply to this product combined with the use of any and all other herbicides containing the active ingredient glyphosate, whether applied separately or in a tank mixture, on a basis of total pounds of glyphosate (acid equivalents) per acre. If more than one glyphosate-containing product is applied to the same site within the same year, you must ensure that the total use of glyphosate (pounds acid equivalents) does not exceed the maximum allowed.

NOTE: Use of this product in any manner not consistent with this label could result in injury to persons, animals, or crops, or have other unintended consequences.

# **6.0 WEED RESISTANCE MANAGEMENT**

GLYPHOSATE GROUP 9 HERBICIDE

For resistance management, this product contains a Group 9 herbicide —Glyphosate. Any weed population may contain or develop plants naturally resistant to this product and other Group 9 herbicides. The resistant biotypes may dominate the weed population if these herbicides are used repeatedly in the same field. Appropriate resistance management strategies must be followed.

When herbicides that affect the same biological site of action are used repeatedly over several years to control the same weed species in the same field, naturally-occurring resistant biotypes may survive a correctly applied herbicide treatment, propagate, and become dominant in that field. Adequate control of these resistant weed biotypes cannot be expected. If weed control is unsatisfactory, it may be necessary to retreat the problem area using a product affecting a different site of action.

To delay herbicide resistance, take one or more of the following steps:

- Rotate the use of this product or other Group 9 herbicides within a growing season sequence or among growing seasons with different herbicide groups that control the same weeds in a field.
- Use tank mixtures with herbicides from a different group if such use is permitted; where information on resistance in target weed species is available, use the less resistance-prone partner at a rate that will control the target weed(s) equally as well as the more resistance-prone partner. Consult your local extension service or certified crop advisor if you are unsure as to which active ingredient is currently less prone to resistance.
- Adopt an integrated weed-management program for herbicide use that includes scouting and uses historical information related to herbicide use and crop rotation, and that considers tillage (or other mechanical control methods), cultural (e.g., higher crop seeding rates; precision fertilizer application method and timing to favor the crop and not the weeds), biological (weed-competitive crops or varieties) and other management practices.
- Scout after herbicide application to monitor weed populations for early signs of resistance development. Indicators of possible herbicide resistance include:
  - (1) failure to control a weed species normally controlled by the herbicide at the dose applied, especially if control is achieved on adjacent weeds;
  - (2) a spreading patch of non-controlled plants of a particular weed species:
  - (3) surviving plants mixed with controlled individuals of the same species. If resistance is suspected, prevent weed seed production in the affected area by an alternative herbicide from a different group or by a mechanical method such as hoeing or tillage. Prevent movement of resistant weed seeds to other fields by cleaning harvesting and tillage equipment when moving between fields and planting clean seed.
- If a weed pest population continues to progress after treatment with this product, discontinue use of this product, and switch to another management strategy or herbicide with a different mode of action, if available.

• Contact your local extension specialist or certified crop advisors for additional pesticide resistance-management and/or integrated weed-management recommendations for specific crops and weed biotypes.

It is advisable to keep accurate records of pesticides applied to individual fields to help obtain information on the spread and dispersal of resistant biotypes. Contact your local sales representative, crop advisor, or extension agent to find out if suspected resistant weeds to this MOA have been found in your region. Do not assume that each listed weed is being controlled by this mechanism of action.

Suspected herbicide-resistant weeds may be identified by these indicators:

- Failure to control a weed species normally controlled by the herbicide at the dose applied, especially if control is achieved on adjacent weeds:
- · A spreading patch of non-controlled plants of a particular weed species; and
- Surviving plants mixed with controlled individuals of the same species.

# 6.1 Weed Resistant Management Practices

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

- Scout your fields before and after herbicide applications.
- Start with a clean field, use 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 of adding other herbicides into a continuous Glyphosate Resistant crop system is to rotate to other Glyphosate Resistant crops.
- Utilize the directed label rate for the most difficult to control weed in your field. Avoid tank mixtures with other herbicides that reduce this product's efficacy (through antagonism), or tank mixture recommendations that encourage application rates of this product below the label recommendations.
- · 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 Willowood Glyphosate, LLC representative, local retailer, or county extension agent.

# 6.2 Management of Glyphosate-Resistant Biotypes

Appropriate testing is needed to determine if a weed is resistant to glyphosate. Visit on the Internet www.weedresistancemanagement.com or www.weedscience.org.

Glyphosate-resistant weeds can be controlled or managed by applying this product in combination with residual pre-emergence herbicides and/or other post emergence herbicides labeled for control of the targeted weed in the crop being grown. For more information, see the "ANNUAL WEEDS RATE TABLE" and "PERENNIAL WEEDS RATE TABLE" a

Since the occurrence of resistant weeds is difficult to detect prior to use, Willowood Glyphosate, LLC accepts no liability for any losses that result from the failure of this product to control resistant weeds.

# 7.0 MIXING

Spray solutions of this product may be mixed, stored, and applied using clean stainless steel, 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.

Eliminate any risk of siphoning the contents of the tank back into the carrier source while mixing. Use approved anti-back-siphoning devices where required by State or local regulations.

A 50-mesh nozzle screen or line strainer on the spray equipment is adequate.

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

# 7.1 Mixing with Water

PERFORMANCE OF THIS PRODUCT CAN BE SIGNIFICANTLY REDUCED IF WATER CONTAINING SOIL SEDIMENT IS USED AS CARRIER. DO NOT MIX THIS PRODUCT WITH WATER FROM PONDS OR DITCHES THAT IS VISIBLY MUDDY OR MURKY.

This product mixes readily with water. Mix spray solutions of this product as follows. Begin filling the mixing tank or spray tank with clean water. Add the required amount of this product near the end of the filling process and mix gently. Foaming of the spray solution can occur during mixing. To prevent or minimize foaming, mix gently, terminate bypass, and return lines at the bottom of the tank, and, if necessary, add an appropriate anti-foam or defoaming agent to the spray solution.

# 7.2 Tank Mixtures

This product does not provide residual weed control. This product may be tank-mixed with other herbicides to provide residual weed control in the soil, a broader weed control spectrum, or an alternate mechanism of action. It is the pesticide user's responsibility to ensure that all products in the listed mixtures are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

Some tank-mix products have the potential to cause crop injury under certain conditions, at certain growth stages and/or under other circumstances. Read the label of all products to be used in the tank mixture prior to use to determine the potential for crop injury.

Tank mixtures with other herbicides, insecticides, fungicides, micronutrients, or foliar fertilizers could result in reduced weed control or crop injury. Not all tank-mix formulations have been tested for compatibility, antagonism, or reduction in product performance. To the extent consistent with applicable law, buyer and all users are responsible for any and all loss or damage in connection with the use or handling of mixtures of this product with herbicides or other materials that are not expressly specified on this label or Fact Sheets published for this product.

When a tank-mix with a generic active ingredient, such as 2,4-D, atrazine, dicamba, diuron, pendimethalin, or any other product or material, is listed on this label, the user is responsible for ensuring that the specific application being made is included on the label of the product being used in the mix.

Refer to all individual product labels and Fact Sheets for all products in the tank mixture, and observe all precautions and limitations on the label, including application timing restrictions, soil restrictions, minimum re-cropping intervals and any crop rotation restrictions. Use according to the most restrictive precautionary statements for each product in the tank mixture. Apply tank mixtures with this product at a minimum spray volume rate of 10 gallons per acre.

# 7.3 Tank-Mixing Procedure

Always predetermine the compatibility of all tank-mix products together in the carrier by mixing small proportional quantities in advance.

Mix only the quantity of spray solution that will be applied that day. Application of tank-mix solutions that are allowed to stand overnight could result in reduced weed control. Prepare tank mixtures of this product as follows:

- 1. Place a 20- to 35-mesh screen or wetting basket over the filling port of the tank.
- 2. Through the screen, fill the tank one-half full with water and start gentle agitation.
- 3. If ammonium sulfate is to be used, add it slowly through the screen into the tank and continue adding water into the tank through the screen. If dry ammonium sulfate is being used, ensure that it is completely dissolved in the tank before adding other products.
- 4. If a wettable powder is used, prepare a slurry of it with water and add it SLOWLY through the screen into the tank while continuing gentle agitation.
- 5. If a flowable formulation is used, premix one part flowable with one part water and add the diluted mixture SLOWLY through the screen into the tank while continuing gentle agitation.
- 6. If an emulsifiable concentrate formulation is used, premix one part emulsifiable concentrate with two parts water and add the diluted mixture SLOWLY through the screen into the tank while continuing gentle agitation.
- 7. Continue filling the tank with water through the screen and add the required amount of this product near the end of the filling process.
- 8. Add individual tank-mix components to the tank as follows: wettable powders, flowables, emulsifiable concentrates, drift reduction additives, water soluble liquids (this product) [Optional text: surfactant].

Maintain gentle agitation at all times until the contents of the tank are sprayed out. If the spray mixture is allowed to settle, agitate thoroughly to re-suspend the mixture before resuming application. Keep by-pass and return lines on or near the bottom of the tank to minimize foaming. A 50-mesh nozzle screen or line strainer on the spray equipment is adequate.

# 7.4 Mixing for Hand-Held Sprayers

All reference throughout this label to concentration of this product in a spray solution is on a percentage-of-volume basis.

Prepare the desired volume of spray solution at a given concentration by mixing the amount of this product indicated in the following table in water.

Amount of WILLOWOOD GLYPHO 6 to Achieve Indicated Concentration in Spray Solution							
Desired Volume of Spray	(percent by volume)						
Solution	0.4%	0.7%	1%	1.5%	4%	7%	
1 gallon	0.5 fl. oz	1 fl. oz	1.3 fl. oz	2 fl. oz	5 fl. oz	9 fl. oz	
25 gallons	13 fl oz	22 fl oz	1 qt	1.5 qts	4 qts	7 qt	
100 gallons	1.6 qt	2.8 qt	1 gal	1.5 gal	4 gal	7 gal	

<sup>2</sup> tablespoons = 1 fluid ounce (fl oz)

For filling backpack and pump-up sprayers, consider mixing the appropriate amount of this product with water in a larger container and then filling the sprayer from the larger container.

### 7.5 Surfactants

Although not always required, surfactant may be added to spray solutions of this product. However, additional surfactant can increase the performance of this product at water carrier volumes above 30 gallons per acre or at application rates below 16 fluid ounces of this product per acre.

Nonionic surfactants that are labeled for use with herbicides may be used. Do not reduce rates of this product when adding surfactant. Use a surfactant concentration of 0.25 to 0.5 percent (1 to 2 quarts per 100 gallons of spray solution) when adding surfactant that contains at least 70 percent active ingredient, or a 1-percent surfactant concentration (4 quarts per 100 gallons of spray solution) when adding surfactant that contains less than 70 percent active ingredient. Read and carefully observe all precautionary statements and other information on the surfactant label.

DO NOT ADD ADDITIONAL SURFACTANT OR ADDITIVES CONTAINING SURFACTANT TO THIS PRODUCT FOR PREHARVEST APPLICATION TO COTTON OR ANY POSTEMERGENCE (IN-CROP) APPLICATION TO GLYPHOSATE RESISTANT COTTON AND GLYPHOSATE RESISTANT FLEX COTTON.

# 7.6 Ammonium Sulfate

Unless otherwise directed, the addition of 1 to 2 percent dry ammonium sulfate by weight (8.5 to 17 pounds per 100 gallons of water), could increase the performance of this product on annual and perennial weeds, particularly under hard water conditions, drought conditions or when tank-mixed with certain residual herbicides. An equivalent amount of a liquid formulation of ammonium sulfate 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 promptly after use to reduce corrosion.

When using ammonium sulfate, apply this product at rates directed on this label; lower application rates will result in reduced performance.

# 7.7 Colorants and Dyes

Colorants and marking dyes may be added to spray solutions of this product; however, they can reduce the performance of this product. Use colorants and dyes according to the manufacturer's directions.

# 7.8 Drift Control Additives

Drift reduction additives may be used with all equipment types, except wiper applicators, sponge bars and controlled droplet applicators (CDA). When a drift reduction additive is used, read, and follow all precautions, limitations, and all other information on the product label. Use of drift reduction additives can affect spray coverage, which could reduce the performance of this product.

# 8.0 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 Application Equipment fixed-wing and helicopter
- Ground Application Equipment boom or boomless systems, pull-type sprayers, floaters, pick-up sprayers, spray coupes and other ground broadcast application equipment
- Hand-held or High-Volume Spray Equipment knapsack and backpack sprayers, pump-up pressure sprayers, handguns, handwands, mistblowers\*, lances and
  other handheld and motorized spray equipment used to direct the spray onto weed foliage
- Selective Application Equipment shielded and hooded sprayers, wiper applicator, sponge bar
- Injection Systems aerial or ground injection sprayers
- Controlled Droplet Applicator (CDA) -handheld or boom-mounted applicators that produce a spray consisting of a narrow range of droplet sizes
- \* This product is not registered in California or Arizona for use in mistblowers.

APPLY THIS PRODUCT USING PROPERLY MAINTAINED AND CALIBRATED EQUIPMENT CAPABLE OF ACCURATELY DELIVERING DESIRED VOLUMES.

# 8.1 Aerial Equipment

DO NOT APPLY THIS PRODUCT USING AERIAL SPRAY EQUIPMENT EXCEPT UNDER CONDITIONS AS SPECIFIED WITHIN THIS LABEL. FOR AERIAL APPLICATION IN CALIFORNIA AND ARKANSAS, REFER TO INSTRUCTIONS SPECIFIC TO THOSE STATES.

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

Use the specified rates of this herbicide in 3 to 15 gallons of water per acre unless otherwise specified on this label. Unless otherwise specified, do not exceed 44 fluid ounces (1.5 lbs. a.e.) per acre. Aerial applications of this product may be made in annual cropping conventional tillage systems, fallow, and reduced tillage systems and preharvest applications. Refer to the individual use area sections of this label for directed volumes and application rates.

### MANDATORY SPRAY DRIFT DIRECTIONS

### **Aerial Applications:**

- Do not release spray at a height greater than 10 ft above the ground or vegetative canopy, unless a greater application height is necessary for pilot safety.
- Applicators are required to use a medium or coarser droplet size (ASABE S572.1) unless tank-mixing with a pesticide product that requires use of a finer droplet size.
   If a finer droplet size is used, applicators are required to use a fine or coarser droplet size (ASABE S572.1).
- If the wind speed is 10 miles per hour or less, applicators must use ½ swath displacement upwind at the downwind application edge of the field. When the wind speed is 11 -15 miles per hour, applicators must use ¾ swath displacement upwind at the downwind edge of the field.
- Do not apply when wind speeds exceed 15 mph at the application site. If the wind speed is greater than 10 mph, the boom length must be 65% or less of the wingspan for fixed wing aircraft and 75% or less of the rotor diameter for helicopters. Otherwise, the boom length must be 75% or less of the wingspan for fixed-wing aircraft and 90% or less of the rotor diameter for helicopters.
- · Do not apply during temperature inversions.

### **Ground Boom Applications:**

- · User must only apply with the release height recommended by the manufacturer, but no more than 4 feet above the ground or crop canopy.
- Applicators are required to use a medium or coarser droplet size (ASABE S572.1) unless tank-mixing with a pesticide product that requires use of a finer droplet size.
   If a finer droplet size is used, applicators are required to use a fine or coarser droplet size (ASABE S572.1).
- Do not apply when wind speeds exceed 15 miles per hour at the application site.
- · Do not apply during temperature inversions.

# **Boomless Ground Applications:**

- Applicators are required to use a medium or coarser droplet size (ASABE S572.1) unless tank-mixing with a pesticide product that requires use of a finer droplet size.
   If a finer droplet size is used, applicators are required to use a fine or coarser droplet size (ASABE S572.1).
- Do not apply when wind speeds exceed 15 miles per hour at the application site.
- . Do not apply during temperature inversions.

Where states have more stringent regulations, they must be observed.

# **SPRAY DRIFT ADVISORIES**

THE APPLICATOR IS RESPONSIBLE FOR AVOIDING OFF-SITE SPRAY DRIFT. BE AWARE OF NEARBY NON-TARGET SITES AND ENVIRONMENT AL CONDITIONS.

### IMPORTANCE OF DROPLET SIZE

An effective way to reduce spray drift is to apply large droplets. Use the largest droplets that provide target pest control. While applying larger droplets will reduce spray drift, the potential for drift will be greater if applications are made improperly or under unfavorable environmental conditions.

### **Controlling Droplet Size - Ground Boom**

Volume - Increasing the spray volume so that larger droplets are produced will reduce spray drift. Use the highest practical spray volume for the application. If a greater spray volume is needed, consider using a nozzle with a higher flow rate.

- Pressure Use the lowest spray pressure recommended for the nozzle to produce the target spray volume and droplet size.
- Spray Nozzle Use a spray nozzle that is designed for the intended application. Consider using nozzles designed to reduce drift.

### **Controlling Droplet Size - Aircraft**

Adjust Nozzles - Follow nozzle manufacturers' recommendations for setting up nozzles. To reduce fine droplets, nozzles must be oriented parallel with the airflow in flight.

# **BOOM HEIGHT - Ground Boom**

For ground equipment, the boom must remain level with the crop and have minimal bounce.

# **RELEASE HEIGHT - Aircraft**

Higher release heights increase the potential for spray drift.

### SHIELDED SPRAYERS

Shielding the boom or individual nozzles can reduce spray drift. Consider using shielded sprayers. Verify that the shields are not interfering with the uniform deposition of the spray on the target area.

# **TEMPERATURE AND HUMIDITY**

When making applications in hot and dry conditions, use larger droplets to reduce effects of evaporation.

### **TEMPERATURE INVERSIONS**

Drift potential is high during a temperature inversion. Temperature inversions restrict vertical air mixing, which can cause small droplets to remain suspended in a concentrated cloud. This cloud can move in unpredictable directions due to the light variable winds common during inversions. Temperature inversions are characterized by increasing temperatures with altitude and are common on nights with limited cloud cover and light to no wind. They can begin to form in late afternoon/early evening and often continue into the morning. Their presence can be indicated by ground fog. 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 concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing.

### MIND

Drift potential increases with wind speed. AVOID APPLICATIONS DURING GUSTY WIND CONDITIONS. Applicators need to be familiar with local wind patterns and terrain that could affect spray drift.

### **Boomless Ground Applications:**

• Setting nozzles at the lowest effective height will help to reduce the potential for spray drift.

# **Handheld Technology Applications:**

• Take precautions to minimize spray drift.

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

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

- 1. In fallow and reduced tillage systems prior to the emergence or transplanting of labeled crops.
- 2. In alfalfa and pasture renovation applications.
- 3. Over-the-top applications in Glyphosate Resistant corn and cotton.
- 4. Preharvest in alfalfa, corn, cotton, wheat, Glyphosate Resistant corn, and Glyphosate Resistant cotton.

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

DO NOT EXCEED A MAXIMUM RATE OF 44 fluid ounces (1.5 lbs. a.e.) PER ACRE OF THIS PRODUCT WHEN MAKING APPLICATIONS BY AIR IN FALLOW AND REDUCED TILLAGE SYSTEMS AND ALFALFA AND PASTURE RENOVATION APPLICATIONS.

DO NOT EXCEED A MAXIMUM RATE OF 22 fluid ounces (0.75 lbs. a.e.) PER ACRE OF THIS PRODUCT WHEN MAKING APPLICATIONS BY AIR IN ALFALFA, CORN, COTTON, WHEAT, GLYPHOSATE RESISTANT CORN AND GLYPHOSATE RESISTANT COTTON PRIOR TO HARVEST. THIS RESTRICTION ALSO APPLIES TO OVER-THE-TOP APPLICATIONS IN GLYPHOSATE RESISTANT CORN AND COTTON.

DO NOT APPLY DICAMBA TANK MIXTURES BY AIR IN CALIFORNIA

# **Aerial Equipment**

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

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 this product within 100 feet of all desirable vegetation or non-target crops.
- 2. If winds are blowing up to 5 miles per hour TOWARD desirable vegetation or non-target crops, do not apply this product within 500 feet of the desirable vegetation or crops.
- 3. If winds are blowing between 5 and 10 miles per hour TOWARD desirable vegetation or non- target crops, a buffer zone greater than 500 feet might be needed to protect the desirable vegetation or crops.
- 4. Do not apply this product using aerial application equipment when winds are blowing in excess of 10 miles per hour.
- 5. Do not apply this product using aerial application equipment when inversion conditions exist.

# FOR AERIAL APPLICATION IN FRESNO COUNTY, CALIFORNIA ONLY (only from February 15 through March 31)

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

### **Product Information:**

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

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

### Written Directions

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

# **Aerial Applicator Training and Equipment**

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

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

Note: For aerial application from April 1 through February 14, refer to the "For Aerial Application in California Only" section of this label.

### **AERIAL APPLICATION IN 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.

Apply this product at the specified rate in 3 to 15 gallons of water per acre.

Use sufficient carrier volume and appropriate equipment set-up to form droplets large enough to avoid drift potential. Coarse droplets in the 300 to 500 (VMD) micron range have a lower drift potential.

Applications are typically to be made with the nozzle release point at 8 to 15 feet above the top of the target plants unless a greater height is required for aircraft safety.

The distance of the outermost nozzles on the boom must not exceed 75 percent of the length of the wingspan or rotor. In many cases, reducing this distance to 65 percent 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 air stream 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 winds 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 can occur when wind speeds are less than 2 miles per hour.

Follow the directions below when an aerial application is made near non-target crops or other desirable vegetation:

- 1. Do not apply this product within 100 feet of non-target crops or any desirable vegetation.
- 2. If winds are blowing up to 5 miles per hour TOWARD non-target crops or desirable vegetation, do not apply this product within 500 feet upwind of the desirable vegetation or crop.
- 3. If winds are blowing between 5 and 10 miles per hour TOWARD non-target crops or desirable vegetation, a buffer zone greater than 500 feet might be needed to protect the crop or desirable vegetation.

# 8.2 Ground Application Equipment

Apply this product at the specified rate as specified on this label in 3 to 40 gallons of water per acre when making a broadcast application using ground application equipment, unless otherwise directed on this label or Fact Sheets published for this product. As the weed density increases, increase the spray volume towards the upper end of this range to ensure complete coverage. Use nozzles that will avoid generating a fine mist. Use flat-fan nozzles with ground application equipment. Check spray pattern for uniform distribution of spray droplets.

# 8.3 Hand-Held and High-Volume Sprayers

When using a handheld sprayer, apply spray solutions of this product uniformly and completely to the foliage of target weeds using a coarse droplet spectrum and a spray-to-wet technique; do not spray to the point of runoff. For the appropriate concentration of this product in the spray solution and timing of application to control specific weeds, woody brush, trees, and vines, refer to the "ANNUAL WEEDS RATE TABLE," "PERENNIAL WEEDS RATE TABLE" and "WOODY BRUSH AND TREES RATE TABLE" of this label.

Spot treatment application of this product for weed control in a cropping system using a handheld sprayer may be made only when specifically directed on this label. The crop sprayed with this product will be killed along with the weeds. Take care not to spray or allow spray to drift outside the target area in order to avoid unwanted crop destruction.

# 8.4 Selective Application Equipment

This product may be applied through shielded applicators, hooded sprayers, wiper applicators or sponge bars after dilution and thorough mixing with water to listed weeds growing in any non-crop 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 directed in this product's labeling.

### AVOID CONTACT OF THIS 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 the height of the weeds varies so that not all weeds are contacted. In these instances, repeat treatment may be necessary.

# **Recirculating Sprayer**

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

# **Shielded and Hooded Sprayers**

A shielded sprayer directs the herbicide solution to the target weeds while protecting the crop or other desirable vegetation from being contacted by the herbicide spray with an impervious material or shield. Use nozzles that provide uniform coverage within the application area. Keep shields properly adjusted to protect desirable vegetation.

A hooded sprayer is a type of shielded sprayer where the spray pattern is fully enclosed, including the top, sides, front and back, thereby shielding the crop or other desirable vegetation from the spray solution.

This product may be diluted in water and applied using a shielded or hooded sprayer to weeds listed on this label growing on any non-crop site described on this label and in between rows of plants (row middles) in any cropping system listed on this label.

Properly adjust the hood to protect desirable vegetation. Ensure that the hood is capable of completely enclosing the spray pattern. If necessary when applying around crops grown on raised beds, extend the front and rear flaps of the hooded sprayer downward to reach the ground in deep furrows.

A hooded sprayer must be configured and operated in a manner that minimizes bouncing and avoids raising the hood up off the ground surface at any time. If the hood is raised, spray particles can escape and come into contact with the crop, causing damage to or destruction of the crop or other desirable vegetation. Avoid operating this equipment on rough or sloping terrain where the spray hood is likely to rise up off the ground surface.

Use hoods designed to minimize excessive dripping or runoff down the inside of the hood, such as a single, low pressure, low-drift, flat-fan nozzle with an 80- to 95-degree spray angle positioned at the top center of the hood, with a spray volume of 20 to 30 gallons per acre.

The following procedures will help reduce the potential for crop injury when using a hooded sprayer:

- Operate the sprayer with the hood on the ground or skimming across the ground surface.
- Leave at least an 8-inch untreated strip over the drill row. (For example, if the crop row width is 38 inches, make the maximum width of the spray hood 30 inches.)
- . Operate at a ground speed of no greater than 5 miles per hour to minimize bouncing of the hooded sprayer.
- · Apply when wind speed is 10 miles per hour or less.
- Use low-drift nozzles that will provide uniform coverage within the application area.

Injury to a crop or other desirable vegetation can occur when application is made to foliage of weeds that come into direct contact with the crop or desirable vegetation. Do not apply this product when leaves of desirable vegetation are growing in direct contact with weeds. Droplets, mist, foam, or splatter of the herbicide solution settling onto desirable vegetation can result in discoloration, stunting or destruction.

# EXTREME CARE MUST BE EXERCISED TO AVOID CONTACT OF HERBICIDE WITH DESIRABLE VEGETATION.

### **Wiper Applicator**

When applied under the conditions described in the following paragraphs, this product CONTROLS many weeds, including volunteer corn, Texas panicum, common rye, shattercane, sicklepod, and Spanish Needles and SUPPRESSES many weeds including Florida beggarweed, Bermuda grass, hemp dogbane, dogfennel, guineagrass, john-songrass, milkweed, silverleaf nightshade, redroot pigweed, giant ragweed, sunflower, Canada thistle, vaseygrass & velvetleaf.

A wiper applicator is a device that physically wipes this product or solutions of this product directly onto the target weed or cut stump.

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 apply this product using a wiper applicator when weeds are wet.

Do not add surfactant to the herbicide solution when using a wiper applicator.

Mix only the amount of this product that will be used during a 1-day period, as reduced product performance can result from the use of solutions held in storage. Clean wiper parts promptly after using this product by thoroughly flushing with water.

For Rope and Sponge Wick Applicators- Mix 80 fluid ounces of this product (3.0 lbs, a.e.) in 2 gallons of water to prepare a 33 percent solution.

For Panel Applicators- Solutions ranging from 33 to 100 percent of this product in water may be used in panel wiper applicators.

# 8.5 Injection Systems

This product may be used in aerial and ground injection spray systems as a liquid concentrate or diluted prior to injecting into the spray stream. Do not mix this concentrated product with the undiluted concentrate of other products for use in injection systems, unless otherwise directed.

# 8.6 Controlled Droplet Applicator (CDA)

The amount of this product applied per acre using a controlled droplet applicator (CDA) must be no less than the rate specified on this label for application using conventional broadcast application equipment.

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

A controlled droplet applicator produces a spray pattern that is not easily visible. Use extreme care to avoid spray or drift from contacting the foliage or any other green tissue of desirable vegetation, as plant damage or destruction could result.

# 9.0 ANNUAL AND PERENNIAL CROPS

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

See the "GLYPHOSATE RESISTANT CROPS" section of this label for directions for use in Glyphosate Resistant crops.

### TYPES OF APPLICATIONS

Chemical Fallow; Preplant Fallow Beds; Preplant; At-Planting; Preemergence; Hooded Sprayer in Row Middles; Shielded Sprayer in Row Middles; Wiper Applicator in Row Middles; Post-Harvest

### **USE INSTRUCTIONS**

This product may be applied during fallow intervals preceding planting, prior to planting or transplanting, at-planting, or preemergence to annual and perennial crops listed on this label, except where specifically limited. For any crop NOT listed on this label, application must be made a minimum of 30 days prior to planting.

Unless otherwise directed, apply this product according to the rates listed in the "ANNUAL WEEDS RATE TABLE," "PERENNIAL WEEDS RATE TABLE" and "WOODY BRUSH AND TREES RATE TABLE" of this label.

Application rates specified on this label for hard-to-control weeds supersede the rates in the "ANNUAL WEEDS RATE TABLE," "PERENNIAL WEEDS RATE TABLE" and "WOODY BRUSH AND TREES RATE TABLE" of this label. Additional information on hard-to- control weeds can be found on Fact Sheets published for this product.

Application of this product may be repeated as needed up to a maximum of 170 fluid ounces (6.0 lbs. a.e.) per acre per year. Refer to specific use sections of this label for additional information on minimum intervals required before re-application of this product.

Hooded sprayers and wiper applicators capable of preventing all contact of the herbicide solution with the crop may be used in mulched or unmulched row middles after crop establishment. Wiper applicators may be used over the top of crops to control tall weeds only when specifically directed in the individual crop sections that follow. Refer to the "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label for information regarding the potential for crop injury using selective application equipment. Crop injury is possible with these methods of application.

Spot treatment application of this product for weed control in a cropping system may be made only when specifically directed in the individual crop sections that follow.

Unless otherwise prohibited, all applications of this product described in the sections that follow may be made using aerial application equipment where appropriate, provided that the applicator complies with the precautions and restrictions specified on this label. Refer to the "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label for information on aerial application and procedures for avoiding spray drift that could cause injury to any vegetation not intended for application. Use of appropriate buffers will help prevent injury to adjacent vegetation.

# PRECAUTIONS:

Avoid contact of herbicide with foliage, green shoots or stems, bark, exposed roots (including those emerging from plastic mulch), or fruit of crops because severe
injury or destruction may result.

- Apply before seed germination in coarse sandy soils to further minimize the risk of injury.
- When making pre-emergence and at planting applications, applications must be made before crop emergence to avoid severe crop injury. Broadcast applications
  made at emergence will result in injury or death to emerged seedlings.

### RESTRICTIONS:

- Unless otherwise specified in this product's labeling, treatments with selective equipment including wipers and hooded sprayers must be made at least 14 days prior to harvest.
- In crops where spot treatments are allowed, do not treat more than 10 percent 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.
- Post-harvest or fallow applications must be made at least 30 days prior to planting any non-labeled crop.
- When making pre-emergence and at planting applications, applications must be made before crop emergence to avoid severe crop injury. Broadcast applications made at emergence will result in injury or death to emerged seedlings.
- For broadcast post-emergent treatments, do not harvest or feed treated vegetation for 8 weeks following application, unless otherwise specified.
- DO NOT apply more than 105 fluid ounces (3.75 lbs. glyphosate a.e.) per acre in a single application if using ground equipment.
- DO NOT apply more than 44 fluid ounces (1.5 lbs. a.e.) per acre in a single application if using aerial equipment. EXCEPTION: 64 fluid ounces (2.25 lbs. a.e.) may be applied by air to Sugarcane.
- DO NOT apply more than 170 fluid ounces (6.0 lbs. a.e.) per acre per year for all applications.
- This product may be applied during the fallow intervals preceding planting, prior to planting or transplanting, at planting, or preemergence to annual and perennial crops listed label, except where specifically limited. For any crop NOT listed on this label, application must be made a minimum of 30 days prior to planting.

# 9.1 Cereal and Grain Crops

LABELED CROPS: Barley; Buckwheat; Millet (pearl, proso); Oats; Rice; Rye; Quinoa; Teff; Teosinte; Triticale; Wheat (all types); Wild Rice

TYPES OF APPLICATIONS: Those listed in Section 9.0, plus Red Rice Control Prior to Planting Rice; Spot Treatment (except rice); Control of Barnyardgrass in Rice Using Renovation Treatment (California only); Wiper Applicator (feed barley and wheat only); Preharvest (feed barley and wheat only)

# Preplant, At-Planting, Preemergence

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

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

USE INSTRUCTIONS: Flush fields prior to application to obtain uniform germination and stand of red rice and then apply 32 fluid ounces (1.125 lbs. a.e.) of this product in 5 to 10 gallons of water per acre when the majority of the red rice plants are at the 2-leaf stage and no more than 4 inches tall. Red rice plants with less than 2 true leaves might only be partially controlled. Avoid spraying during conditions of low humidity, as reduced control of red rice could result.

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

# **Spot Treatment (Except Rice)**

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

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

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

THIS APPLICATION FOR USE IN CALIFORNIA ONLY

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

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

# Over-the-Top Wiper Applicator (Feed Barley and Wheat Only)

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

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

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

USE INSTRUCTIONS: This product provides weed control when applied prior to harvest of feed barley or wheat. For feed barley, apply after the hard-dough stage when grain moisture is 20 percent or less. For wheat, apply after the hard-dough stage when grain moisture is 30 percent or less. Stubble may be grazed immediately after harvest.

Apply this product in 10 to 20 gallons of water per acre when using ground application equipment and in 3 to 10 gallons of water per acre when using aerial application equipment.

RESTRICTIONS: Do not apply more than 22 fluid ounces (0.75 lbs. a.e.)of this product per acre for preharvest application. Allow a minimum of 7 days between application and harvest or grazing.

### **Post-Harvest**

USE INSTRUCTIONS: This product may be applied for weed control after harvest of cereal crops. Higher label rates might be needed to control large weeds that were growing in the field at the time of harvest. Tank mixtures with 2,4-D or dicamba may be used. It is the pesticide user's responsibility to ensure that all products in the listed mixtures are registered for the intended use. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

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

# 9.2 Corn (Non-Glyphosate Resistant)

TYPES OF CORN: Field corn; Popcorn; Seed corn; Silage corn; Sweet corn

TYPES OF APPLICATION: Those listed in Section 9.0, plus Spot Treatment; Preharvest

### Preplant, At-Planting, Preemergence

USE INSTRUCTIONS: This product may be applied alone or in a tank-mix before, during or after planting corn, but prior to crop emergence.

TANK MIXTURES: This product may be tank-mixed with the following products. It is the pesticide user's responsibility to ensure that all products in the listed mixtures are registered for the intended use. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

Apply these tank mixtures in 10 to 20 gallons of water or 10 to 60 gallons of nitrogen solution per acre.

2,4-D; acetochlor; atrazine; bicyclopyrone; carfentrazone-ethyl; clopyralid; dicamba; diflufenzopyr; dimethenamid; dimethenamid-p; flufenacet; flumetsulam; flumiclorac pentyl ester; isoxaflutole; linuron; mesotrione; metolachlor; s-metolachlor; metribuzin; pendimethalin; rimsulfuron; saflufenacil; simazine; thiencarbazone-methyl

For hard-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 22 fluid ounces (0.75 lbs. a.e.) of this product per acre in these tank mixtures.

For other annual weeds listed on this label, apply 16 to 22 fluid ounces (0.56 to 0.75 lbs. a.e.) of this product per acre when weeds are less than 6 inches tall and 22 to 32 fluid ounces (0.75 to 1.125 lbs. a.e.) per acre when weeds are over 6 inches tall. When using a nitrogen solution as the carrier, higher application rates might be needed for acceptable weed control.

RESTRICTIONS: Application of 2,4-D or dicamba must be made a minimum of 7 days prior to planting corn.

In Southern states, do not mix this product in nitrogen solutions for application to hard-to-control grasses such as barnyardgrass, fall panicum, broadleaf signalgrass, annual ryegrass and any perennial weeds. This area includes Illinois and Indiana south of Route 50, Alabama, Arkansas, Delaware, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, New Jersey, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia, and West Virginia.

# **Hooded Sprayer**

USE INSTRUCTIONS: This product may be applied using a hooded sprayer for weed control in between rows of corn. Only hooded sprayers that completely enclose the spray pattern may be used. See additional instructions on the use of hooded sprayers in the "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label.

RESTRICTIONS: Corn must be at least 12 inches tall, measured without extending leaves. Do not apply more than 22 fluid ounces of this product (0.75 lb. a.e.) per acre for each hooded sprayer application and no more than 64 fluid ounces (2.25 lbs. a.e.) per acre per year total.

# **Spot Treatment**

USE INSTRUCTIONS: This product may be applied as a spot treatment prior to silking of corn.

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

### **Preharvest**

USE INSTRUCTIONS: Up to 64 fluid ounces of this product (2.25 lbs. a.e.) per acre may be applied using ground application equipment, or up to 44 fluid ounces (1.5 lbs. a.e.) per acre using aerial application equipment, when kernel-fill is complete and the corn is physiologically mature (black layer formed) and grain moisture is 35 percent or less. It is not recommended that corn grown for seed be treated because a reduction in germination or vigor may occur.

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

# Post-Harvest

USE INSTRUCTIONS: This product may be applied for weed control after harvest of corn. Higher label rates might be needed to control large weeds that were growing in the field at the time of harvest. Tank mixtures with 2,4-D or dicamba may be used. It is the pesticide user's responsibility to ensure that all products in the listed mixtures are registered for the intended use. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

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

# 9.3 Cotton (Non-Glyphosate Resistant)

TYPES OF APPLICATION: Those listed in Section 9.0, plus Selective Equipment; Spot Treatment; Preharvest

# Preplant, At-Planting, Preemergence

USE INSTRUCTIONS: This product may be applied before, during or after planting cotton, but prior to crop emergence.

TANK MIXTURES: This product may be tank-mixed with 2,4-D or Clarity and applied prior to planting only. This product may also be tank-mixed with the following products and applied prior to crop emergence. It is the pesticide user's responsibility to ensure that all products in the listed mixtures are registered for the intended use. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

Apply these tank mixtures in 10 to 20 gallons of water per acre.

acetochlor; clomazone; diuron; flumioxazin; fluometuron; fomesafen; metolachlor; s-metolachlor; norflurazon; pendimethalin; prometryn; pyrithiobac-sodium; saflufenacil

### **Selective Equipment**

USE INSTRUCTIONS: This product may be applied using a hooded or shielded sprayer, or over the top of cotton using a wiper applicator to control tall weeds. See additional instructions on the use of this selective equipment in the "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label.

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

### **Spot Treatment**

USE INSTRUCTIONS: This product may be applied in cotton as a spot treatment prior to boll opening.

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

### **Preharvest**

USE INSTRUCTIONS: This product provides weed control and cotton re-growth inhibition when applied prior to harvest. For weed control, apply at rates given in the "ANNUAL WEEDS RATE TABLE" and "PERENNIAL WEEDS RATE TABLE" of this label. For cotton re-growth inhibition, apply 16 to 44 fluid ounces of this product (0.56 to 1.5 lbs. a.e.) per acre. Make preharvest application only after sufficient bolls have developed to produce the desired yield. Application made prior to this time could affect maximum yield potential.

Up to 44 fluid ounces of this product (1.5 lbs. a.e.) 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 MIXTURES: This product may be tank-mixed with tribufos, thidiazuron or ethephon top provide additional enhancement of cotton leaf-drop. It is the pesticide user's responsibility to ensure that all products in the listed mixtures are registered for the intended use. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

RESTRICTIONS: Allow a minimum of 7 days between application and harvest. Do not apply to cotton grown for seed, as a reduction in germination or vigor may occur. DO NOT ADD ADDITIONAL SURFACTANT OR ADDITIVES CONTAINING SURFACTANT TO THIS PRODUCT FOR PREHARVEST APPLICATION TO COTTON.

# 9.4 Fallow Systems

This product may be applied during the fallow period prior to planting or emergence of any crop listed on this label. Application must be made a minimum of 30 days prior to the planting of any crop not listed on this label.

TYPES OF APPLICATION: Chemical Fallow; Preplant Fallow Beds; Aid-to-Tillage

### **Chemical Fallow**

USE INSTRUCTIONS: This product may be used as a substitute for tillage to control annual weeds in fallow fields. Broadcast or spot treatment application will also control or suppress many perennial weeds in fallow fields. Tank-mix this product with 2,4-D or dicamba for a broader weed control spectrum. It is the pesticide user's responsibility to ensure that all products in the listed mixtures are registered for the intended use. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

Aerial application of up to 44 fluid ounces of this product (1.5 lbs. a.e.) per acre may be made onto fallow fields where there is sufficient buffer to prevent injury due to drift onto adjacent crops.

PRECAUTIONS: Some crop injury could occur if dicamba is applied within 45 days of planting.

RESTRICTIONS: DO NOT APPLY DICAMBA TANK MIXTURES BY AIR IN CALIFORNIA.

### **Preplant Fallow Beds**

USE INSTRUCTIONS: This product may be applied to fallow beds prior to planting or emergence of any crop listed on this label. This product will control weeds listed in the "ANNUAL WEEDS RATE TABLE," "PERENNIAL WEEDS RATE TABLE" and "WOODY BRUSH AND TREES RATE TABLE" of this label prior to planting.

TANK MIXTURES: Apply 8 fluid ounces of this product (0.28 lbs. a.e.), plus the labeled rate of oxyfluorfen per acre to control the following weeds up to the maximum height or length indicated: 3 inches - common cheeseweed, chickweed, groundsel; 6 inches - London rocket, shepherd's-purse.

Apply 11 fluid ounces of this product (0.375 lbs. a.e.), plus the labeled rate of oxyfluorfen per acre to control the following weeds up to the maximum height or length indicated: 6 inches - common cheeseweed, groundsel, marestail (*Conyza canadensis*); 12 inches - chickweed, London rocket, shepherd's-purse.

PRECAUTIONS: Some crop injury could occur if dicamba is applied within 45 days of planting.

RESTRICTIONS: DO NOT APPLY DICAMBA TANK MIXTURES BY AIR IN CALIFORNIA.

### Aid-to-Tillage

USE INSTRUCTIONS: This product may be used in conjunction with tillage practices in fallow systems, or prior to the planting of crops listed on this label (preplant), to control downy brome, cheat, volunteer wheat, tansy mustard and foxtail. Apply 8 fluid ounces of this product (0.28 lbs. a.e.) in 3 to 10 gallons of water per acre before weeds are 6 inches in height. Application must be followed by conventional tillage no later than 15 days after application and before re-growth occurs. Allow a minimum of 1 day after application before tillage.

PRECAUTIONS: Tank mixtures with residual herbicides could result in reduced performance of this product. It is the pesticide user's responsibility to ensure that all products in the listed mixtures are registered for the intended use. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

# 9.5 Grain Sorghum (Milo)

TYPES OF APPLICATION: Those listed in Section 9.0, plus Spot Treatment; Wiper Applicator; Preharvest

# Preplant, At-Planting, Preemergence

USE INSTRUCTIONS: This product may be applied alone or in a tank mixture before, during or after planting grain sorghum, but prior to crop emergence.

TANK MIXTURES: This product may be tank-mixed with the following products. It is the pesticide user's responsibility to ensure that all products in the listed mixtures are registered for the intended use. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

Apply these tank mixtures in 10 to 20 gallons of water or 10 to 60 gallons of nitrogen solution per acre.

acetochlor; atrazine; metolachlor; s-metolachlor; saflufenacil

For hard-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 22 fluid ounces of this product (0.75 lbs. a.e.) per acre in a tank mixture with one or more of the products listed here.

For control of other annual weeds listed on this label, apply 16 to 22 fluid ounces (0.56 to 0.75 lbs. a.e.) of this product per acre when weeds are less than 6 inches tall, and 22 to 32 fluid ounces (0.75 – 1.125 lbs. a.e.) per acre when weeds are over 6 inches tall. When using a nitrogen solution as the carrier, the application rate might need to be increased to achieve acceptable weed control.

# **Spot Treatment, Wiper Applicator**

USE INSTRUCTIONS: This product may be applied as a spot treatment in grain sorghum before heading. This product may also be applied over the top of grain sorghum using a wiper applicator to control or suppress tall weeds. See additional instructions on the use of wiper applicators in the "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label.

RESTRICTIONS: For spot treatment, do not apply this product to more than 10 percent of the total field area to be harvested. When applied using a wiper applicator, allow a minimum of 40 days between application and harvest. Do not use a roller applicator. Do not feed or graze grain sorghum fodder or ensile vegetation within the application area.

# **Hooded Sprayer**

USE INSTRUCTIONS: This product may be applied using a hooded sprayer for weed control in between rows of grain sorghum. Make application before grain sorghum sends tillers between the drill rows. If tillers are sprayed with this herbicide, the main plant could be damaged or destroyed. Contact of this product in any manner with any vegetation to which application is not intended could cause damage. Only hooded sprayers that completely enclose the spray pattern may be used. See additional instructions on the use of hooded sprayers in the "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label.

RESTRICTIONS: Grain sorghum must be at least 12 inches tall, measured without extending leaves. Do not graze or feed grain sorghum forage or fodder following application of this product using a hooded sprayer. Do not apply more than 22 fluid ounces of this product (0.75 lbs. a.e.) per acre per hooded sprayer application and no more than 64 fluid ounces (2.25 lbs. a.e.) per acre per vear total.

# **Preharvest**

USE INSTRUCTIONS: Up to 44 fluid ounces of this product (1.5 lbs. a.e.) per acre may be applied after sorghum grain has reached 30 percent moisture or less. As with other herbicides that cause sudden plant death, avoid preharvest application of this product on grain sorghum (milo) infected with charcoal rot as lodging can occur.

RESTRICTIONS: Allow a minimum of 7 days between application and harvest of grain sorghum. Do not apply more than 44 fluid ounces of this product (1.5 lbs. a.e.) per acre. Preharvest application of this product on grain sorghum (milo) is not registered for use in California.

### Post-Harvest

USE INSTRUCTIONS: This product may be applied for weed control after harvest of grain sorghum. Higher application rates might be needed to control large weeds that were growing in the field at the time of harvest. Tank mixtures with 2,4-D or dicamba may be used. It is the pesticide user's responsibility to ensure that all products in the listed mixtures are registered for the intended use. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

This product may be applied to grain sorghum stubble following harvest to control or suppress re-growth. Apply 22 fluid ounces of this product (0.75 lbs. a.e.) per acre for control or 16 fluid ounces (0.56 lbs. a.e.) per acre for suppression.

RESTRICTIONS: Allow a minimum of 7 days between application and harvest or feeding of vegetation within the application area.

# 9.6 Herbs and Spices

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

TYPES OF APPLICATION: Those listed in Section 9.0, plus Spot Treatment (peppermint and spearmint only); Wiper Applicator (peppermint and spearmint only)

PRECAUTIONS: This product could cause crop injury when applied prior to transplanting or direct- seeding crops into plastic mulch. Remove residual product from the plastic prior to planting with a single 0.5-inch application of water, either by natural rainfall or by irrigation. Ensure that the 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 of emerged seedlings.

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

USE INSTRUCTIONS: This product may be applied as a spot treatment in peppermint and spearmint, or over the top of peppermint and spearmint using a wiper applicator to control tall weeds. Apply spot treatments on a spray-to-wet basis with hand-held equipment, such as backpack sprayers, pump-up pressure sprayers, handguns, handwands or any other hand-held or motorized spray equipment used to direct the spray solution to a limited area. Application may be repeated on the same area at 30-day intervals.

In wiper applications, the applicator must be adjusted so that the wiper contact point is at least 2 inches above the crop. Weeds must be a minimum of 6 inches taller than the crop. See additional instructions on the use of wiper applicators in the "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label.

RESTRICTIONS: Allow a minimum of 7 days between application and harvest. For spot treatment application, do not apply this product to more than 10 percent of the total field area to be harvested.

# 9.7 Oilseed Crops

LABELED CROPS: Borage; Buffalo gourd (seed); Canola (non-glyphosate resistant); Castor oil plant; Chinese tallowtree; Crambe; Cuphea; Echium; Euphorbia; Evening primrose; Flax; Gold of pleasure; Hare's ear mustard; Jojoba; Lesquerella; Meadowfoam; Milkweed; Mustard; Niger seed; Oil radish; Poppy seed; Rape; Rose hip; Safflower; Sesame; Stokes aster; Sunflower; Sweet rocket; Tallowwood; Tea oil plant; Vernonia

TYPES OF APPLICATION: Those listed in Section 9.0. plus Preharvest (except buffalo gourd)

USE INSTRUCTIONS: Refer to the following table for maximum application rates of this product for use in safflower, sunflower and all other oilseed crops listed in this section, if a preharvest application is to be made. If a preharvest application is NOT to be made, the maximum application rate of this product for all preemergence, selective equipment and post-harvest applications in any oilseed crop listed in this section is limited only by the maximum of 170 fluid ounces (6.0 lbs. a.e.) per acre per year. If a preharvest application is intended to be made to any crop listed in this section, except buffalo gourd, the maximum combined total of all preemergence and selective equipment applications is limited as indicated in the following table. See the "PRODUCT INFORMATION" section of this label for more information on Maximum Application Rates.

Maximum Application Rates if a Preharvest Application is Made				
Safflower				
Combined total for all Preemergence and Selective Equipment applications	64 fluid ounces (2.25 lbs. a.e.) per acre			
Preharvest application	64 fluid ounces (2.25 lbs. a.e.) per acre			
Sunflower				
Combined total for all Preemergence and Selective Equipment applications	22 fluid ounces (0.75 lbs. a.e.) per acre			
Preharvest application	22 fluid ounces (0.75 lbs. a.e.) per acre			
All Other Oilseed Crops Listed (Except Buffalo Gourd)				
Combined total for all Preemergence and Selective Equipment applications	44 fluid ounces (1.5 lbs. a.e.) per acre			
Preharvest application	32 fluid ounces (1.125 lbs. a.e.)per acre			

RESTRICTIONS: Do not exceed a total application rate of 170 fluid ounces (6.0 lbs. a.e.) of this product per acre per year. Preharvest application is not permitted on buffalo gourd.

### Preplant, At-Planting, Preemergence

USE INSTRUCTIONS: This product may be applied before, during or after planting oilseed crops listed in this section, but must be applied prior to crop emergence. Observe the maximum application rates listed at the beginning of this section.

TANK MIXTURES: For sunflower, a tank mixture with pendimethalin may be applied before, during or after planting into conventionally tilled soil, a cover crop, established sod or previous crop residue. It is the pesticide user's responsibility to ensure that all products in the listed mixtures are registered for the intended use. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

See the use instructions at the beginning of this section for important information on maximum application rates for preemergence and selective equipment applications of this product.

### **Selective Equipment**

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

# **Preharvest (Except Buffalo Gourd)**

USE INSTRUCTIONS: This product provides weed control and serves as a harvest aid when applied to a physiologically mature oilseed crop listed in this section. For safflower, up to 64 fluid ounces (2.25 a.e.) of this product may be applied per acre when seed has lost its opaque character, approximately 20 to 30 days after the end of flowering of the secondary branches. For sunflower, up to 22 fluid ounces (0.75 lbs. a.e.) of this product per acre may be applied when the backsides of sunflower heads are yellow and bracts are turning brown, and seed moisture content is less than 35 percent. For all other oilseed crops listed in this section (except buffalo gourd), up to 32 fluid ounces (1.125 lbs. a.e.) of this product per acre may be applied prior to harvest.

RESTRICTIONS: DO NOT MAKE A PREHARVEST APPLICATION if you have exceeded the maximum application rates for the combined total of all preemergence and selective equipment applications listed in the table at the beginning of this section. Make only 1 preharvest application of this product and allow a minimum of 7 days between application and harvest or feeding to livestock. Application must be made a minimum of 30 days prior to the planting of any crop not listed on this label. Preharvest application is not allowed on buffalo gourd or on Glyphosate Resistant or TruFlex Glyphosate Resistant canola.

### Post-Harvest

USE INSTRUCTIONS: This product may be applied for weed control after harvest of oilseed crops. Higher application rates might be needed for control of large weeds that were growing in the field at the time of harvest. Tank mixtures with 2,4-D or dicamba may be used. It is the pesticide user's responsibility to ensure that all products in the listed mixtures are registered for the intended use. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

RESTRICTIONS: Do not exceed a total application rate of 170 fluid ounces of this product (6.0 lbs. a.e.) per acre per year. Allow a minimum of 7 days between application of this product and harvest or feeding of vegetation within the application area. Application must be made a minimum of 30 days prior to the planting of any crop not listed on this label.

# 9.8 Soybean (Non-Glyphosate Resistant)

TYPES OF APPLICATION: Those listed in Section 9.0, plus Spot Treatment; Selective Equipment; Preharvest

# Preplant, At-Planting, Preemergence

USE INSTRUCTIONS: This product may be applied alone or in a tank mixture before, during or after planting soybean, but prior to crop emergence.

TANK MIXTURES\*: This product may be tank-mixed with 2,4-D or Dicamba and applied prior to planting only. This product may also be tank-mixed with the following products and applied prior to crop emergence. It is the pesticide user's responsibility to ensure that all products in the listed mixtures are registered for the intended use. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

Apply these tank mixtures in 10 to 20 gallons of water per acre.

acetochlor; alachlor; atrazine; carfentrazone-ethyl; chlorimuron ethyl; clethodim; clomazone; cloransulam-methyl; dimethenamid; dimethenamid-p; fenoxyprop; fluazifop-p-butyl; flufenacet; flumetsulam; flumiclorac pentyl ester; flumioxazin; fluthiacet-methyl; fomesafen; imazaquin; imazethapyr; lactofen; linuron; metolachlor; s-metolachlor; metribuzin; pendimethalin; pyroxasulfone; quizalofop P-ethyl; saflufenacil; sulfentrazone; tribenuron methyl; trifluralin

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

For hard-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 22 fluid ounces (0.75 lbs. a.e.) of this product per acre in a tank mixture with one of the products listed. For other annual weeds listed on this label, apply 16 to 22 fluid ounces (0.56 to 0.75 lbs. a.e.) of this product per acre when weeds are less than 6 inches tall and 22 to 32 fluid ounces (0.75 to 1.125 lbs. a.e.) when weeds are over 6 inches tall.

# **Spot Treatment**

USE INSTRUCTIONS: This product may be applied as a spot treatment prior to initial pod set in soybean.

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

### **Selective Equipment**

USE INSTRUCTIONS: This product may be applied in soybean using a shielded sprayer, hooded sprayer, wiper applicator or sponge bar. See additional instructions on the use of selective equipment in the "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label.

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

# **Preharvest**

USE INSTRUCTIONS: This product may be applied to soybean prior to harvest after pods have set and lost all green color. Apply at rates given in the "ANNUAL WEEDS RATE TABLE" and "PERENNIAL WEEDS RATE TABLE" of this label. Take care to avoid excessive seed shatter loss due to ground application equipment.

RESTRICTIONS: Do not apply more than 105 fluid ounces of this product (3.75 lbs. a.e.) per acre for preharvest application using ground application equipment or more than 44 fluid ounces (1.5 lbs. a.e.) per acre using aerial application equipment. Allow a minimum of 7 days between application and harvest of soybean. If the preharvest application rate is greater than 22 fluid ounces (0.75 lbs. a.e.) per acre, do not graze or harvest hay or fodder within the application area for livestock feed within 25 days of application. If the application rate is 22 fluid ounces (0.75 lbs. a.e.) per acre or less, the grazing restriction is reduced to 14 days after application. Do not apply to soybeans grown for seed as a reduction in germination or vigor may occur.

# 9.9 Sugarcane

TYPES OF APPLICATION: Those listed in Section 9.0, plus Spot Treatment

### Preplant, At-Planting, Preemergence

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

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

### **Spot Treatment**

USE INSTRUCTIONS: This product may be applied as a spot treatment in sugarcane. For control of volunteer or diseased sugarcane, apply a 1-percent solution of this product in water using a handheld sprayer and a spray-to-wet technique. Make application to volunteer or diseased sugarcane when there are at least 7 new leaves. Avoid contact of this herbicide with healthy sugarcane plants as severe damage or destruction could result.

RESTRICTIONS: Do not feed or graze sugarcane foliage within the application area.

# **Hooded Sprayer**

USE INSTRUCTIONS: This product may be applied using a hooded sprayer for weed control in between rows of sugarcane. See additional instructions on the use of hooded sprayers in the "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label.

RESTRICTIONS: Do not allow weeds within the application area to come into contact with the crop.

### **Fallow Treatment**

USE INSTRUCTIONS: This product may be used as a replacement for tillage in fields that are lying fallow between sugarcane crops. This product may also be used to remove the last stubble of ration cane by applying 80 to 105 fluid ounces (3.0 to 3.75 lbs. a.e.) of this product in 10 to 40 gallons of water per acre to new growth having at least 7 new leaves. Allow a minimum of 7 days after application before tillage.

Ground or aerial application equipment may be used. Aerial application of up to 64 fluid ounces (2.25 lbs. a.e.) per acre may be made onto fallow sites where there is sufficient buffer to prevent drift onto adjacent crops. Tank mixtures with 2,4-D or dicamba may be used. It is the pesticide user's responsibility to ensure that all products in the listed mixtures are registered for the intended use. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

### **Sugarcane Ripening**

USE INSTRUCTIONS: This product may be used as a foliar-applied plant growth regulator to hasten ripening and extend the period of high sucrose level in both low- and high-tonnage sugarcane. Most of the sucrose increase is concentrated in the top nodes of the cane stalk. To maximize sugar recovery where topping is practiced at harvest, top at the base of the fourth leaf. Consult your state sugarcane authority regarding the degree of sucrose response that can be anticipated prior to application of this product.

As a result of leaf desiccation, improved trash burn can be expected.

Apply this product at the following rates and timing according to the State in which the sugarcane is grown. Use the higher application rate within the given range when applying to sugarcane under adverse ripening conditions or to less responsive varieties.

FLORIDA - Apply 5 to 12 fluid ounces (0.18 to 0.42 lbs. a.e.) of this product per acre 3 to 5 weeks before harvest of LAST RATOON CANE ONLY.

HAWAII - Apply 9 to 21 fluid ounces (0.32 to 0.74 lbs. a.e.) of this product per acre 4 to 10 weeks before harvest.

LOUISIANA - Apply 4 to 12 fluid ounces (0.14 to 0.42 lbs, a.e.) of this product per acre 3 to 7 weeks before harvest of RATOON CANE ONLY.

PUERTO RICO - Apply 5 fluid ounces (0.18 lbs. a.e.) of this product per acre 3 to 5 weeks before harvest of RATOON CANE ONLY.

TEXAS - Apply 5 to 12 fluid ounces (0.18 to 0.42 lbs. a.e.) of this product per acre 3 to 5 weeks before harvest of RATOON CANE ONLY.

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

Rainfall within 6 hours after application could reduce the effectiveness of this product.

Application to sugarcane grown for seed could result in a reduction in germination or vigor. To the extent consistent with applicable law, buyer and all users are responsible for any and all loss or damage in connection with the preharvest use of this product on sugarcane grown for seed.

RESTRICTIONS: Do not feed or graze sugarcane forage following application. Do not plant subsequent crops within 30 days after application of this product 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.

Do not apply for ripening to any crops other than sugarcane. Use of this product in any manner not consistent with this label could result in injury to persons, animals, or crops, or have other unintended consequences.

# 9.10 Vegetable Crops

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

TYPES OF APPLICATION: Chemical Fallow; Preplant Fallow Beds; Preplant; At-Planting; Preemergence; Prior to Transplanting Vegetables; Hooded Sprayer in Row Middles; Shielded Sprayer in Row Middles; Wiper Applicator in Row Middles; Directed Application (non-bearing ginseng only); Wiper Application (carrot, rutabaga, sweet potato only). Spot Treatment or Preharvest (Dry Beans, Peas, Lentils, and Chickpeas only). Post-Harvest

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

Avoid contact of this herbicide with foliage, green shoots or stems, bark, exposed roots (including those emerging from the plastic mulch), or fruit of crops, as severe crop injury or destruction could result.

Transplanted seedlings coming into contact with freshly sprayed weeds could result in significant crop injury.

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

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

# 9.10.1 Brassica Vegetables

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

# 9.10.2 Bulb Vegetables

LABELED CROPS: All cultivars, varieties and/or hybrids of Chive (including Chinese); Daylily; Elegans hosta; Fritillaria; Garlic (including great-headed, serpent); Kurrat; Leek (including lady's, wild); Onion (including Beltsville bunching, bulb, Chinese, fresh, green, macrostem, pearl, potato, tree, Welsh); Shallot

# 9.10.3 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

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

# 9.10.4 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, upland); Dandelion; Dock (sorrel); Dokudami; Endive (escarole); Florence fennel; Gow kee; Lettuce (head, leaf); Orach; Parsley; Purslane (garden, winter); Radicchio (red chicory); Rhubarb; Spinach; New Zealand spinach; Vine spinach; Swiss chard; Watercress (upland); Water spinach.

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

# 9.10.5 Fruiting Vegetables

LABELED CROPS: All cultivars, varieties and/or hybrids of Eggplant (including African, pea, scarlet); Cocona; Garden huckleberry; Goji berry; Groundcherry (*Physalis* spp.); Martinynia; Naranjilla; Okra; Pepino; Pepper (includes bell pepper, chili pepper, cooking pepper, pimento, sweet pepper); Roselle; Sunberry; Tomatillo; Tomato

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

# 9.10.6 Legume Vegetables (Succulent or Dried)

LABELED CROPS: Bean (*Lupinus*: includes grain lupin, sweet lupin, white lupin, 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 APPLICATION: Those listed in Section 9.0, plus Spot Treatment (dry beans, peas, lentils chickpeas only); Preharvest (dry beans, peas, lentils chickpeas only)

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

USE INSTRUCTIONS: 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 fluid ounces (0.75 lbs. a.e.) of this product per acre in dry beans, or up to 64 fluid ounces (2.25 lbs. a.e.) of this product per acre in dry peas, lentils, and chickpeas, in 10 to 20 gallons of water using ground application equipment, or use a 2-percent solution in a handheld sprayer. Apply at or beyond the bud stage of growth.

RESTRICTIONS: Allow a minimum of 7 days between application and harvest. Only one spot treatment application may be made per year. Do not combine spot treatment with a preharvest broadcast application on the same crop area. Allow a minimum of 30 days between application and the planting of any crop not listed on this label. Do not feed vines and hay from the application area to livestock. Do not apply this product in cowpeas or field (feed) peas, since these crops is considered to be grown only as livestock feed.

### Preharvest (Dry Beans, Peas, Lentils and Chickpeas Only)

USE INSTRUCTIONS: This product may be applied over the top of dry beans, peas, lentils, and chickpeas prior to harvest. Apply up to 22 fluid ounces (0.75 lbs. a.e.) of this product per acre in dry beans, or up to 44 fluid ounces (1.5 lbs. a.e.) per acre in dry peas, lentils, and chickpeas, in 3 to 20 gallons of water per acre at the hard dough stage of the legume seed (30 percent grain moisture or less).

RESTRICTIONS: Allow a minimum of 7 days between application and harvest. Only one preharvest application may be made per year. Do not combine a preharvest application with a spot treatment application on the same crop area. Allow a minimum of 30 days between application and the planting of any crop not listed on this label. Do not feed vines and hay from the application area to livestock. Do not make a preharvest application of this product in cowpeas or field (feed) peas since these crops is considered to be grown only as livestock feed.

# 9.10.7 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; Turneric; Turnip; Wasabi; Yacon; Yam bean; True yam

TYPES OF APPLICATION: Those listed in Section 9.0, plus Directed Application (non-bearing ginseng only); Wiper applicator (carrot, rutabaga, sweet potato only)

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

USE INSTRUCTIONS: This product may be applied for weed control in established non-bearing ginseng using a boom sprayer, CDA, shielded sprayer, wiper applicator, handheld or backpack wand, lance, or orchard gun. See additional use instructions in the "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label.

PRECAUTIONS: Control the application so as to not allow any contact of this product with the ginseng plant. Droplets, mist, foam, or splatter of the herbicide solution settling onto desirable vegetation could result in discoloration, stunting or destruction.

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

### Wiper Applicator (Carrot, Rutabaga and Sweet Potato Only)

USE INSTRUCTIONS: A 33-percent solution of this product by volume in water may be applied using a wiper applicator over the top of carrot, rutabaga, and sweet potato for the control of tall weeds. See additional use instructions for wiper applicators in the "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label.

RESTRICTIONS: For carrot, a maximum of two wiper or sponge bar applications may be made a minimum of 60 days prior to harvest following the first application and 7 days prior to harvest following the second application or if only one wiper application is made over the top of the carrot crop. For rutabaga, allow a minimum of 14 days between application and harvest. For sweet potato, a maximum of five wiper or sponge bar applications may be made with a minimum of 14 days between applications and a minimum of 7 days prior to harvest.

# 9.11 Miscellaneous Crops

LABELED CROPS: Aloe vera; Asparagus; Bamboo shoots; Globe artichoke; Okra; Peanut; Pineapple; Sugar beet (non-glyphosate resistant)

TYPES OF APPLICATION: Those listed in Section 9.0, plus Spot Treatment (asparagus)

PRECAUTIONS: Preemergence application must be made before the crop emerges from the soil 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, apply this product in row middles using a hooded sprayer, shielded sprayer or wiper applicator prior to vine development, otherwise severe crop injury or destruction could result.

Unless otherwise specified in 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.

### **Weed Control. Site Preparation**

USE INSTRUCTIONS: This product may be applied for spot weed control and site preparation prior to planting or transplanting crops listed in this section.

PRECAUTIONS: This product could cause crop injury when applied prior to transplanting or direct- seeding crops into plastic mulch. Remove residues of this product from the plastic with a single 0.5-inch application of water, either by natural rainfall or irrigation, prior to planting. Ensure that the wash water flushes off the plastic mulch and does not enter transplant holes.

RESTRICTIONS: Do not apply this product within 7 days prior to emergence of the first asparagus spears. Allow a minimum of 21 days between residue removal and transplanting. Do not feed or graze pineapple forage from within the application area.

### **Spot Treatment (Asparagus)**

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

RESTRICTIONS: Do not apply this product to more than 10 percent of the total field area to be harvested. Do not harvest asparagus within 5 days of a spot treatment application.

### **Post-Harvest in Asparagus**

USE INSTRUCTIONS: This product may be applied for weed control after the last harvest of asparagus and all spears have been removed. If spears are allowed to re-grow, delay application until ferns have developed and make the application as a directed or shielded spray in order to avoid contact of this product with ferns, stems or spears. See additional use instructions in the "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label.

PRECAUTIONS: Direct contact of this product with asparagus could result in serious crop injury. 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.

# 10.0 TREE, VINE AND SHRUB CROPS (Alphabetical)

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

TYPES OF APPLICATION: Preplant (site preparation); Broadcast Spray; Weed Control; Middles (between rows of trees, vines, or bushes); Strips (within rows of trees, vines, or bushes); Selective Equipment (shielded sprayer, wiper applicator); Directed Sprays; Spot Treatments; Perennial Grass Suppression; Cut Stump Application

USE INSTRUCTIONS: Unless specifically prohibited in the individual crop sections that follow, this product may be applied using a boom sprayer, controlled droplet applicator (CDA), shielded sprayer, wiper applicator, handheld or backpack sprayer, lance, or orchard gun, in middles (between rows of trees, vines or bushes), strips (within rows of trees, vines or bushes), and for weed control or perennial grass suppression in established tree fruit and nut groves, orchards and vineyards. It may also be used for site preparation prior to planting or transplanting these crops.

Apply 11 to 105 fluid ounces (0.375 to 3.75 lbs. a.e.) of this product per acre as directed in the "ANNUAL WEEDS RATE TABLE" and "PERENNIAL WEEDS RATE TABLE" of this label. Use the higher application rate within a given range when weeds are stressed, growing in dense populations or greater than 12 inches tall. Application may be repeated as needed up to a maximum of 224 fluid ounces (8.0 lbs. a.e.) of this product per acre per year. See the "PRODUCT INFORMATION" section of this label for more information on Maximum Application Rates.

# PRECAUTIONS:

- Use extreme care to avoid contact of this herbicide solution, spray, drift or mist with foliage or green bark of trunk, branches, suckers, fruit or other parts of desirable trees, canes, and vines.
- Avoid application when recent pruning wounds or other mechanical injury have occurred. Contact of this product with other than matured brown bark could result in serious crop damage or destruction.
- Only shielded or directed sprayers may be used in crops where the potential for crop contact is high, and then only where there is sufficient clearance.
- For application in strips (within rows of trees), only selective equipment (directed sprayer, hooded sprayer, shielded sprayer or wiper applicator) may be used in order to minimize the potential for overspray or drift of this product onto the crop.
- For berry crops, hooded sprayers must be fully enclosed including top, sides, front and back.
- Only wiper applicators or shielded sprayers capable of preventing all contact of this product with the crop may be used. See additional use instructions and precautions
  in the "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label.

# RESTRICTIONS:

- Allow a minimum of 3 days between application of this product and transplanting.
- Only shielded or directed sprayers may be used in crops where the potential for crop contact is high, and then only where there is sufficient clearance.

- For application in strips (within rows of trees), only selective equipment (directed sprayer, hooded sprayer, shielded sprayer or wiper applicator) may be used in order to minimize the potential for overspray or drift of this product onto the crop.
- · For berry crops, hooded sprayers must be fully enclosed including top, sides, front and back.
- Only wiper applicators or shielded sprayers capable of preventing all contact of this product with the crop may be used.
- Do not apply more than 105 fluid ounces (3.75 lbs. a.e.) per acre in a single application if using ground equipment. EXCEPTION: 224 fluid ounces (8.0 lbs. a.e.) may be applied to non-food tree crops.
- Do not apply more than 44 fluid ounces (1.5 lbs. a.e.) per acre in a single application if using aerial equipment. EXCEPTION: 224 fluid ounces (8.0 lbs. a.e.) may be applied to non-food tree crops.
- Do not apply more than 224 fluid ounces (8.0 lbs. a.e.) per acre per year for all applications.

### Middles (between rows)

USE INSTRUCTIONS: This product will control or suppress annual and perennial weeds and ground covers growing between rows of tree, vine and shrub crops listed on this label. If weeds are under drought stress, irrigate prior to application. Reduced weed control could result if weeds have been recently mowed at the time of application.

TANK MIXTURES: A tank mixture of this product with oxyflurofen may be applied for annual weed control between rows (middles) of a variety of tree and vine crops when weeds are stressed or growing in dense populations. Application of 11 to 22 fluid ounces (0.375 to 0.75 lbs. a.e.) of this product plus the label rate of oxyflurofen per acre will control annual weeds with a maximum height or length 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, stinging nettle and common purslane (suppression). This tankmix will also control common cheeseweed (malva) or hairy fleabane with a maximum height or length of 3 inches.

### Strips (within rows)

TANK MIXTURES: This product may be applied within rows of tree, vine, and shrub crops in tank mixtures with the following products. It is the pesticide user's responsibility to ensure that all products in the listed mixtures are registered for the intended use. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

2,4-D; bromacil; clethodim; diuron; fluazifop-P-butyl; flumioxazin; glufosinate-ammonium; indaziflam; napropamide; norflurazon; oryzalin; oxyfluorfen; pendimethalin; penoxsulam; pyraflufen ethyl; rimsulfuron; saflufenacil; sethoxydim; simazine; thiazopyr

RESTRICTIONS: Do not apply these tank mixtures in Puerto Rico.

# **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, vine, and shrub crops.

For suppression of tall fescue, fine fescue, orchardgrass and quackgrass, apply 6.75 fluid ounces (0.24 lbs. a.e.) of this product in 10 to 20 gallons of water per acre.

For suppression of Kentucky bluegrass covers, apply 4 fluid ounces (0.14 lbs. a.e.) of this product per acre. Do not add ammonium sulfate to the spray mix.

Mow cool-season grass covers in the spring to even their height and then apply this product 3 to 4 days after mowing.

For suppression of vegetative growth and seed head inhibition of bahiagrass for approximately 45 days, apply 4 fluid ounces (0.14 lbs. a.e.) of this product in 10 to 25 gallons of water per acre 1 to 2 weeks after full green-up or after mowing to a uniform height of 3 to 4 inches prior to seed head emergence.

For suppression for up to 120 days, apply 2.5 fluid ounces (0.09 lbs. a.e.) of this product per acre followed by an application of 2 to 3 fluid ounces per acre about 45 days later. Make no more than two applications per year.

For burndown of bermudagrass, apply 22 to 44 fluid ounces (0.75 to 1.5 lbs. a.e.) of this product in 3 to 20 gallons of water per acre. Make this application only if a reduction of the bermudagrass stand can be tolerated. When burndown is required prior to harvest, make the application a minimum of 21 days prior to harvest to allow sufficient time for burndown to occur.

For suppression of bermudagrass, apply 4 to 11 fluid ounces (0.14 to 0.375 lbs. a.e.) of this product per acre east of the Rocky Mountains and 11 fluid ounces (0.375 lbs. a.e.) west of the Rocky Mountains in a total spray volume of 3 to 20 gallons per acre no sooner than 1 to 2 weeks after full green-up. If the bermudagrass is mowed prior to application, maintain a minimum of 3 inches in height. Sequential applications may be made when re-growth occurs and bermudagrass injury and stand reduction can be tolerated. East of the Rocky Mountains, apply 4 to 7 fluid ounces (0.14 to 0.25 lbs. a.e.) of this product per acre in shaded conditions or where a lesser degree of suppression is desired.

# **Cut Stump Application**

Application of this product to a freshly cut tree stump may be made during site preparation or site renovation to control re-growth and re-sprouting of stumps of many tree species, some of which are listed below.

Citrus Trees: Calamondin; Chironja; Citrus hybrids; Grapefruit; Kumquat; Lemon; Lime; Mandarin (tangerine); Orange (all); Pummelo; Tangelo (ugli); Tangor

Fruit Trees: Apple; Apricot; Cherry (sweet, sour); Crabapple; Loquat; Mayhaw; Nectarine; Olive; Peach; Pear, Plum/Prune (all); Quince

Nut Trees: Almond, Beechnut; Brazil nut; Butternut; Cashew; Chestnut; Chinquapin; Filbert (hazelnut); Hickory Nut; Macadamia; Pecan; Pistachio; Walnut (black, English)

USE INSTRUCTIONS: Cut the tree close to the soil surface and immediately apply a 50- to 100-percent (undiluted) solution of this product to the freshly cut surface using application equipment capable of covering the entire cambium. A delay in application could result in reduced performance. Cut the tree during period of active growth and full leaf expansion and apply this product.

RESTRICTIONS: DO NOT MAKE A CUT STUMP APPLICATION WHEN THE ROOTS OF ADJACENT DESIRABLE TREES MIGHT BE GRAFTED TO THE ROOTS OF THE CUT STUMP, AS INJURY COULD OCCUR IN THE ADJACENT TREES. Some sprouts, stems or trees can share a common root system. Adjacent trees having a similar age, height and spacing could be an indicator of a shared root system. Whether grafted or shared, injury is likely to occur to adjacent stems or trees when this product is applied to one or more trees sharing a common root system.

# 10.1 Berry Crops

LABELED CROPS: All cultivars, varieties and/or hybrids of Amur River grape; Aronia berry; Bayberry; Bearberry; Bilberry; Blackberry (including Andean blackberry, arctic blackberry, bingleberry, black satin berry, boysenberry, brombeere, California blackberry, Cherokee blackberry, chesterberry, Cheyenne blackberry, common blackberry, coryberry, darrowberry, dewberry, Dirksen thornless berry, evergreen blackberry, Himalayaberry, hullberry, lavacaberry, loganberry, lowberry, Lucretiaberry, mammoth blackberry, marionberry, mora, mures de ronce, nectarberry, Northern dewberry, oregon evergreen berry, phenomenalberry, rangeberry, ravenberry, Shawnee blackberry, Southern dewberry, tayberry, youngberry, zarzamora); Blueberry (highbush, lowbush); Buffaloberry; Che; Chilean guava; Chokecherry; Cloudberry; Cranberry (including highbush); Currant (black, Buffalo, red, native); Elderberry; European barberry; Gooseberry; Grape; Honeysuckle (edible); Huckleberry; Jostaberry; Juneberry (Saskatoon berry); Kiwifruit (fuzzy, hardy); Ligonberry; Maypop; Mountain pepper berries; Mulberry; Muntries; Partridgeberry; Phalsa; Pincherry; Raspberry (black, red, wild); Riberry; Salal; Schisandra berry; Sea buckthorn; Serviceberry; Strawberry

TYPES OF APPLICATION: Those listed in Section 10.0

PRECAUTIONS: To avoid damage, spray solutions of this product must not be allowed to contact desirable vegetation, including green shoots, canes, or foliage. In the northeast and Great Lakes regions, apply this product in grape vineyards prior to the end of the bloom stage in order to avoid crop injury, or apply using a shielded sprayer or wiper applicator. USE THIS PRODUCT WITH EXTREME CARE AROUND RASPBERRY, AS SERIOUS CROP DAMAGE CAN OCCUR IF ANY PART OF THE VINE COMES INTO CONTACT WITH THIS PRODUCT.

RESTRICTIONS: Allow a minimum of 3 days between application of this product and transplanting. Allow a minimum of 30 days between application and harvest of cranberries or the planting of any crop not listed on this label. Allow a minimum of 14 days between applications and harvest for all other berry and small fruit crops listed here. Do not use selective equipment in kiwi.

# **Spot Treatment (Cranberry Production)**

USE INSTRUCTIONS: Spot treatment application using a handheld sprayer or other appropriate application equipment listed in the "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label may be used to control weeds in berry and small fruit crops listed in this section.

For control of weeds growing in dry ditches (interior and perimeter) of cranberry production areas, drop water level to remove standing water in ditches and apply a 1- to 2-percent solution of this product with a handheld sprayer to adequately wet the vegetation only; do not spray to the point of runoff. To achieve maximum weed control in dry ditches, apply this product within 1 day after water drawdown to ensure application to actively growing weeds and allow a minimum of 2 days after application before reintroduction of water.

RESTRICTIONS: Allow a minimum of 30 days between spot treatment application and harvest of cranberries. Do not apply this material through irrigation system. Do not make applications by air Do not apply directly to water. Use nozzles that produce medium- to large-sized droplets to minimize spray drift and avoid crop injury.

# **Post-Harvest (Cranberry Production)**

USE INSTRUCTIONS: This product may be applied for weed control after the harvest of cranberries. In cranberry bogs, apply this product after cranberry vines are dormant (after they have turned red) using a handheld sprayer, wiper applicator or any other appropriate application equipment listed in the "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label. With a handheld sprayer, apply a 0.4- to 0.7-percent solution of this product to adequately wet the vegetation only; do not spray to the point of runoff. With a handheld boom sprayer, apply 44 to 86 fluid ounces (1.5 to 3.0 lbs. a.e.) of this product per acre.

PRECAUTIONS: Even though vines appear dormant, contact of this product with desirable vegetation could result in damage or severe plant injury. Cranberry plants that are directly sprayed could be killed.

RESTRICTIONS: Apply this product only after cranberries have been harvested. Do not apply to more than 10 percent of the total bog. Allow a minimum of 6 months between post-harvest application and the next harvest of cranberries. Do not apply using aerial application equipment. Do not apply directly to water.

# 10.2 Citrus Fruit Crops

LABELED CROPS: All cultivars, varieties and/or hybrids of Calamondin; Chironja; Citron; Citros Hybrids; Grapefruit (including Japanese summer); Kumquat; Lemon; Lime (including Australian desert lime, Australian finger lime, Australian round lime, Brown river finger lime, Mount white, New Guinea wild, Russell river, sweet, and Tahiti); Mandarin (including Mediterranean, Satsuma); Orange (all); Pummelo; Tangelo; Tangerine (Mandarin); Tangor; Uniq Fruit (ugli)

TYPES OF APPLICATION: Those listed in Section 10.0

USE INSTRUCTIONS: The following use instructions pertain to application in Florida and Texas only.

For burndown or control of the weeds list ed below, apply this product at the specified rate in 3 to 40 gallons of water per acre. Where weed foliage is dense, use 10 to 30 gallons of water per acre.

To control goatweed, apply 44 to 64 fluid ounces (1.5 to 2.25 lbs. a.e.) of this product in 20 to 30 gallons of water per acre when plants are actively growing. Apply 44 fluid ounces (1.5 lbs. a.e.) of this product per acre when plants are less than 8 inches tall and 64 fluid ounces (2.25 lbs. a.e.) of this product per acre when plants are greater than 8 inches tall. If goatweed is greater than 8 inches tall, the use of this product in a tank mixture with bromacil + diuron or diuron could improve weed control. Refer to the individual product labels for specific crops, rates, geographic restrictions, and precautionary statements.

	Level of Perennial Weed Control at Various Application Rates (amount of this product per acre)					
Weed Species	22 fl oz (0.75 lbs. a.e.)	44 fl oz (1.5 lbs. a.e.)	64 fl oz (2.5 lbs. a.e.)	<b>105 fl oz</b> (3.75 lbs. a.e.)		
Bermudagrass	В	_	PC	С		
Guineagrass Texas and Florida Ridge Florida Flatwoods	B -	C B	C C	CC		
Paragrass	В	С	С	С		
Torpedograss	S	_	PC	С		

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

RESTRICTIONS: Allow a minimum of 1 day between application and harvest of citrus fruit crops. For citron groves, apply as a directed spray only.

# 10.3 Miscellaneous Tree Food Crops

LABELED CROPS: Cactus (all, including prickly pear, dragon fruit); Palm (Heart, Leaves)

TYPES OF APPLICATION: Those listed in Section 10.0.

# 10.4 Non-Food Tree Crops

LABELED CROPS: Pine; Poplar; Eucalyptus; Christmas trees; all other non-food tree crops

TYPES OF APPLICATION: Those listed in Section 10.0.

This product may be used as a post-directed spray and spot treatment around established poplar, eucalyptus, Christmas Trees, and other nonfood tree crops.

PRECAUTIONS: Avoid contact of spray, drift, or mist of this product with foliage or green bark of established Christmas trees and other pine trees. Desirable plants can be protected from the spray solution by using shields or coverings of impermeable materials.

RESTRICTIONS: DO NOT apply this product as a broadcast application over the top of plantations or tree crops.

### **Site Preparation**

USE INSTRUCTIONS: This product may be used for weed control prior to planting non-food tree crops.

PRECAUTIONS: Protect non-target plants from being sprayed with this product during site preparation application.

# **Directed Spray (Eucalyptus and Poplar Production)**

USE INSTRUCTIONS: This product can be used around established eucalyptus and poplar trees to control undesirable vegetation. Use a 1 to 2 percent spray solution to control herbaceous weeds in eucalyptus farms. Use a 2 percent spray solution for control of undesirable woody brush and trees. For "hard-to-control" weeds, use a 5 to 10 percent spray solution. Avoid contact of spray, drift, or mist with foliage, green bark, or non-woody surface roots of plants.

RESTRICTIONS: AVOID HERBICIDE CONTACT WITH DESIRABLE VEGETATION. Desirable vegetation contacted by the herbicide solution may be injured or controlled.

# **Wiper Application**

USE INSTRUCTIONS: This product may be used through wick or other suitable wiper applicators for control or partial control of grass and broadleaf weeds listed in the "WEEDS CONTROLLED" section of this label. For wick applicators, mix 71 fluid ounces (2.5 lbs. a.e.) of this product with 2 gallons water to make a 33% solution. For wiper systems that can handle thicker solutions, such as force-fed systems, a 33 to 100% solution may be used. For best results, ensure that the herbicide solution is allowed to contact the maximum amount of leaf surface. As weed densities increase, decrease equipment speed to allow sufficient herbicide flow to wet all weed surfaces contacted. Weeds not contacted will be unaffected.

RESTRICTIONS: AVOID HERBICIDE CONTACT WITH DESIRABLE VEGETATION. Desirable vegetation contacted by the herbicide solution may be injured or controlled.

# 10.5 Pome Fruit Crops

LABELED CROPS: All cultivars, varieties and/or hybrids of Apple; Azarole; Crabapple; Loquat; Mayhaw; Medlar; Pear (including Asian & Oriental pear); Quince (including Chinese and Japanese quince); Tejocote.

TYPES OF APPLICATION: Those listed in Section 10.0.

RESTRICTIONS: Allow a minimum of 1 day between application and harvest of pome fruit.

# 10.6 Stone Fruit Crops

LABELED CROPS: Apricot, Cherry (sweet, tart); Nectarine; Olive; Peach; Plum/Prune (all types); Plumcot

TYPES OF APPLICATION: Those listed in Section 10.0.

PRECAUTIONS: Avoid application near trees with recent pruning wounds or other mechanical injury. Apply only near trees that have been planted in the orchard for a minimum of 2 years. ENSURE THAT NO PART OF A PEACH TREE IS CONTACTED WITH OVERSPRAY OR DRIFT OF THIS PRODUCT.

RESTRICTIONS: Allow a minimum of 17 days between application and harvest of stone fruit. In olive groves, apply as a directed spray only. Remove suckers and low-hanging limbs a minimum of 10 days prior to application.

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 spray 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 application 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.

# 10.7 Tree Nut Crops

LABELED CROPS: Almond; Beechnut; Betelnut; Brazil nut; Butternut; Cashew; Chestnut; Chinquapin; Coconut; Filbert (hazelnut); Hickory nut; Macadamia; Pecan; Pine nut; Pistachio; Walnut (black, English)

TYPES OF APPLICATION: Those listed in Section 10.0.

RESTRICTIONS: Allow a minimum of 3 days between application and harvest of tree nuts, except coconut. Allow a minimum of 14 days between application and harvest of coconut.

# 10.8 Tropical and Subtropical Trees and Fruit Crops

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; Ilama; Imbe; Imbu; Jaboticaba; Jackfruit; Longan; Lychee; Mamey apple; Mango; Mangosteen; Marmaladebox (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 APPLICATION: Those listed in Section 10.0, and as a Bananacide (banana only)

USE INSTRUCTIONS: This product may be applied for weed control or for site preparation prior to transplanting crops listed in this section.

RESTRICTIONS: Allow a minimum of 1 day between application and harvest in banana, coffee, guava, papaya, and plantain crops. Allow a minimum of 14 days between application and harvest of all other tropical and subtropical tree fruit listed here. In coffee and banana, delay application until 3 months after transplanting to allow the new coffee or banana plant to become established.

# Bananacide (Banana Only)

USE INSTRUCTIONS: This product may be used to destroy banana plants infected with the Banana Bunchy Top Virus, as well as non-infected banana plants, in order to establish a disease-free buffer around a plantation. Remove all fruit from the plants within the area prior to treatment. Inject 0.04 fluid ounce (1 milliliter) of this concentrated product (undiluted) for every 2 to 3 inches of pseudostem diameter of the banana plant to be controlled. Make the injection at least one foot above the ground, except for very small plants, which can be injected vertically into the top. Any subsequent re-growth must also be destroyed. Mechanically destroy all plants and mats (or units) within a 4-foot radius around a treated mat.

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 might not show symptoms of the Banana Bunchy Top Virus for as many as 125 days; therefore, it is critical that the entire mat (or unit) containing the diseased plant be destroyed immediately.

RESTRICTIONS: Do not apply more than 0.5 fluid ounce (15 milliliters) of this product per mat (or unit). Remove all fruit from plants and mats (units) prior to treatment. Do not harvest any fruit or plant material from treated mats (or units) following injection. Do not allow livestock to consume treated plant material. Following transplant of new banana plants into treated areas, allow plants to become established for 3 months before applying this product for weed control.

### 10.9 Vine Crops

LABELED CROPS: Grapes (raisin, table, wine) Hops; Kiwi, Passion fruit

TYPES OF APPLICATION: Those listed in Section 10.0.

USE INSTRUCTIONS: Apply this product for weed control only when green shoots, canes or foliage are not in the spray zone. In the northeast and Great Lakes regions, applications must be made prior to the end of bloom stage of grapes to avoid injury, or make applications with shielded sprayers or wiper equipment.

RESTRICTIONS: Allow a minimum of 14 days between application and harvest of vine crops. Do not use selective equipment in Kiwi.

# 11.0 PASTURE GRASSES, FORAGE LEGUMES AND RANGELAND

When applied as directed, this product will control those annual and perennial grasses and broadleaf weeds listed.

Application rates specified on this label for hard-to-control weeds, or those specified on separate supplemental labeling for this product, supersede rates listed in the "AN-NUAL WEEDS RATE TABLE," "PERENNIAL WEEDS RATE TABLE" and "WOODY BRUSH AND TREES RATE TABLE" of this label.

### RESTRICTIONS:

- DO NOT apply more than 105 fluid ounces (3.75 lbs. a.e.) per acre in a single application if using ground equipment. EXCEPTION: 224 fluid ounces (8.0 lbs. a.e.) per acre may be applied to Pasture.
- DO NOT apply more than 44 fluid ounces (1.5 lbs. a.e.) per acre in a single application if using aerial equipment. EXCEPTION: 224 fluid ounces (8.0 lbs. a.e.) per acre may be applied to Pasture.
- DO NOT apply more than 224 fluid ounces (8.0 lbs. a.e.) per acre per year for all applications.

# 11.1 Alfalfa (non-glyphosate resistant), Clover and Other Forage Legumes

LABELED CROPS: Alfalfa (non-glyphosate resistant); Clover; Kenaf; Kudzu; Lespedeza; Leucaena; Lupin; Sainfoin; Trefoil; Velvet bean; Vetch (all types)

TYPES OF APPLICATION: Preplant; At-Planting; Preemergence; Spot Treatment; Wiper Applicator; Preharvest (except kenaf and leucaena); Stand Removal.

### Preplant, At-Planting, Preemergence

USE INSTRUCTIONS: This product may be applied before, during or after planting crops listed in this section, but prior to crop emergence. Refer to the "ANNUAL WEEDS RATE TABLE" of this label for application rates of this product for specific weeds. Application must be made prior to emergence of the crop.

If a single application is made at rates of 44 fluid ounces (1.5 lbs. a.e.) of this product per acre or less, no waiting period is required between treatment and feeding or grazing livestock.

If application rates greater than 44 fluid ounces (1.5 lbs. a.e.) of this product per acre are made, remove domestic livestock before application.

### Spot Treatment, Wiper Applicator (Alfalfa and Clover)

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

RESTRICTIONS: For spot treatment and use with a wiper applicator, apply in areas where the movement of domestic livestock can be controlled. Remove domestic livestock before application and wait a minimum of 3 days after application before grazing livestock or harvesting. Do not apply this product to more than 10 percent of the total field area at any one time.

### **Weed Control in Dormant Alfalfa**

USE INSTRUCTIONS: This product will control or suppress many weeds, including quackgrass, downy brome and cheatgrass in dormant alfalfa. Apply 5.5 to 8 fluid ounces (0.19 to 0.28 lbs. a.e.) of this product per acre in the spring when alfalfa is dormant, after spring temperatures have warmed enough to encourage weed growth, but prior to initiation of trifoliate leaf expansion of the alfalfa crop. Application made after expansion of the first trifoliate leaf will cause growth reduction and reduced crop yield.

PRECAUTIONS: Improper application of this product to alfalfa can cause crop injury. Do not use this product on dormant alfalfa if a slight yield reduction in the first cutting cannot be tolerated. Slight discoloration of the alfalfa crop could occur, but will re-green and resume growth under moist soil conditions as effects of this product wear off.

RESTRICTIONS: Do not add ammonium sulfate to spray solutions of this product for application to dormant alfalfa. Do not make more than one application per year. Allow a minimum of 36 hours after application before grazing livestock or harvesting.

# Preharvest, Stand Removal (Alfalfa only)

USE INSTRUCTIONS: This product may be used in declining alfalfa stands or any stand of alfalfa where crop destruction is acceptable. This application will severely injure or destroy the stand of alfalfa. This product will control annual and perennial weeds including quackgrass, when applied prior to the harvest of alfalfa.

Use up to 22 – 44 fluid ounces (0.75 – 1.5 lbs. a.e.) of this product per acre. Applications may be made at any time of the year. For control of quackgrass, apply in the spring, late summer or fall when quackgrass is actively growing. Treatments for quackgrass must be followed by deep tillage for complete control. The treated crop and weeds can be harvested and fed to livestock after 36 hours.

### RESTRICTIONS:

Do not apply more than 44 fluid ounces (1.5 lbs. a.e.) of this product per acre as a pre-harvest treatment.

Do not use for alfalfa grown for seed, as a reduction in germination or vigor may occur.

Make only one application to an existing stand of alfalfa per year.

# Renovation

(Not for use in California)

This product may be applied as a broadcast application to existing stands of alfalfa, clover, and other labeled forage legumes. Labeled crops may be planted into the treated area.

MAKE APPLICATIONS ACCORDING TO THE RATES LISTED IN "ANNUAL WEEDS RATE TABLE", PERENNIAL WEEDS RATE TABLE", AND "WOODY BRUSH AND TREES RATE TABLE" IN THIS LABEL.

Remove domestic livestock before application. If application rates of 44 fluid ounces (1.5 lbs. a.e.) per acre or less are used wait 36 hours after application before grazing or harvesting. If application rates greater than 44 fluid ounces (1.5 lbs. a.e.) per acre are used, wait 8 weeks after application before grazing or harvesting.

# 11.2 Conservation Reserve Program (CRP)

TYPES OF APPLICATION: Postemergence Weed Control in Dormant CRP Grasses; Over-the-Top Wiper Applicator; Renovation (rotating out of CRP); Site Preparation.

# Postemergence Weed Control in Dormant CRP Grasses, Wiper Applicator

USE INSTRUCTIONS: Apply this product to suppress competitive growth and seed production of undesirable vegetation on CRP land. Application may be made using a wiper applicator to control tall weeds, or as a broadcast application or spot treatment to dormant CRP grasses.

For selective weed control using broadcast application equipment, apply 5 to 8 fluid ounces (0.18 to 0.28 lbs. a.e.) 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 application may be made after desirable perennial grasses have reached dormancy.

Crops listed on this label may be planted into the area at any time; all other crops may be planted 30 days after application.

PRECAUTIONS: Some stunting of CRP perennial grasses will occur if broadcast application is made when plants are not dormant.

RESTRICTIONS: Do not apply more than 64 fluid ounces (2.25 lbs. a.e.) of this product per acre per year onto CRP land. No waiting period is required between application and grazing or harvesting for feed.

# Renovation (Rotating Out of CRP), Site Preparation

USE INSTRUCTIONS: This product may be used to prepare CRP land for crop production. Refer to federal, state, or local use guides for CRP renovation information.

MAKE APPLICATIONS ACCORDING TO THE RATES LISTED IN "ANNUAL WEEDS RATE TABLE", "PERENNIAL WEEDS RATE TABLE", AND "WOODY BRUSH AND TREES RATE TABLE" IN THIS LABEL

Crops listed on this label may be planted into the area at any time; all other crops may be planted 30 days after application.

RESTRICTIONS: Do not apply more than 64 fluid ounces (2.25 lbs. a.e.) of this product per acre per year onto CRP land. No waiting period is required between application and grazing or harvesting for feed.

# 11.3 Grass or Turfgrass Seed Production

LABELED CROPS: Any grass (Gramineae family), except Corn, Sorghum, Sugarcane, and those listed in the "CEREAL AND GRAIN CROPS" section of this label.

TYPES OF APPLICATION: Preplant; At-Planting; Preemergence; Renovation; Removal of Established Stand; Site Preparation; Shielded Sprayer; Wiper Applicator; Spot Treatment; Creating Rows in Annual Ryegrass

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

USE INSTRUCTIONS: This product may be applied before, during, or after planting or for renovation of turf or forage grass areas grown for seed production.

MAKE APPLICATIONS ACCORDING TO THE RATES LISTED IN "ANNUAL WEEDS RATE TABLE", "PERENNIAL WEEDS RATE TABLE", AND "WOODY BRUSH AND TREES RATE TABLE" IN THIS LABEL.

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

RESTRICTIONS: Do not disturb soil or underground plant parts before treatment. Delay tillage or renovation techniques such as vertical mowing, coring, or slicing for 7 days after application to allow proper translocation into underground plant parts.

If application rate is 64 fluid ounces (2.25 lbs. a.e.) of this product per acre or less, no waiting period between application and feeding or livestock grazing is required. If the rate is greater than 64 fluid ounces (2.25 lbs. a.e.) per acre, remove domestic livestock before application and wait 8 weeks after application before grazing or harvesting. Crops listed on this label may be planted into the area at any time; all other crops may be planted 30 days after application.

# **Shielded Sprayer**

USE INSTRUCTIONS: Apply 22 to 64 fluid ounces (0.75 to 2.25 lbs. a.e.) of this product in 10 to 20 gallons of water per acre using a shielded sprayer to control weeds between grass seed rows. Uniform planting in straight rows will aid shielded sprayer application. Apply when the grass seed crop is small enough to easily pass by the protective shields. See additional instructions on the use of shielded sprayers in the "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label.

PRECAUTIONS: Contact of this product in any manner to any vegetation to which application is not intended could cause damage.

# **Wiper Applicator**

USE INSTRUCTIONS: This product may be applied over the top of desirable grasses using a wiper applicator for the control of tall weeds. See additional instructions on the use of wiper applicators in the "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label.

PRECAUTIONS: Contact of the herbicide solution with desirable vegetation may result in damage or destruction. 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 weed height varies so that not all weeds are contacted. In these instances, repeat treatments may be necessary. Better results may be obtained if 2 applications are made in opposite directions.

# **Spot Treatment**

USE INSTRUCTIONS: Apply a 1-to 1.5 percent solution of this product using a handheld sprayer to control weeds within established vegetation prior to heading of grasses grown for seed or to control sod remnants or other unwanted vegetation after sod is harvested.

PRECAUTIONS: This product will kill the desirable grasses along with the weeds. Take care not to spray or allow spray to drift outside the target area in order to avoid unwanted crop destruction.

# **Creating Rows in Annual Ryegrass**

USE INSTRUCTIONS: Use low-pressure nozzles or drop nozzles designed to target the application over a narrow band. Set nozzle height to establish the desired row spacing and apply 11 to 22 fluid ounces of this product (0.375 to 0.75 lbs. a.e.)per acre. Apply before ryegrass reaches 6 inches in height. Use a higher application rate within this range when ryegrass is greater than 6 inches in height.

PRECAUTIONS: Take care not to spray or allow spray to drift outside target area in order to avoid unwanted crop destruction.

### 11.4 Pastures

LABELED CROPS: Bahiagrass; Bermudagrass; Bluegrass; Brome; Fescue; Guineagrass; Kikuyugrass; Orchardgrass; Pangola grass; Ryegrass; Timothy; Wheatgrass and any grass (*Gramineae* family), except Corn, Sorghum, Sugarcane, and those listed in the "CEREAL AND GRAIN CROPS" section of this label.

TYPES OF APPLICATION: Preplant; Preemergence; Pasture Renovation; Spot Treatment; Wiper Applicator; Postemergence Weed Control (broadcast application)

# Preplant, Preemergence, Pasture Renovation, Stand Removal

USE INSTRUCTIONS: This product may be applied for weed control prior to planting or emergence of forage grasses. This product may also be applied to control perennial pasture species listed on this label prior to re-planting.

MAKE APPLICATIONS ACCORDING TO THE RATES LISTED IN "ANNUAL WEEDS RATE TABLE", "PERENNIAL WEEDS RATE TABLE", AND "WOODY BRUSH AND TREES RATE TABLE" IN THIS LABEL

RESTRICTIONS: If application rates total 64 ounces (2.25 lbs. a.e.) of this product per acre or less, no waiting period between application and feeding or livestock grazing is required. If the rate is greater than 64 fluid ounces per acre, remove domestic livestock before application and wait 8 weeks after application before grazing or harvesting. Crops listed on this label may be planted into the area at any time; all other crops may be planted 30 days after application.

### **Spot Treatment, Wiper Applicator**

USE INSTRUCTIONS: This product may be applied in pastures as a spot treatment or over the top of desirable grasses using a wiper applicator to control tall weeds. To achieve maximum performance, remove domestic livestock before application and wait a minimum of 7 days after application before grazing livestock or harvesting for feed. See additional instructions on the use of wiper applicators in the "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label. Application may be repeated on the same area at 30-day intervals.

RESTRICTIONS: For spot treatment or use with a wiper applicator at rates of 64 fluid ounces per acre (2.25 lbs. a.e.) or less, this product may be applied over the entire pasture or any portion of it. At rates above 64 fluid ounces (2.25. lbs. a.e.) per acre, this product may be applied over no more than 10 percent of the total pasture at any one time.

# Chemical Mowing (Bermudagrass Pastures Prior to Spring Growth or Immediately after First Cutting)

USE INSTRUCTIONS: For control of Annual bluegrass, Cheat, Crabgrass, Henbit, Johnsongrass seedling, Little barley, Oats, Ryegrass, Sandbur field, Wheat, Wild mustard

This product may be applied at 11 fluid ounces (0.375 lbs. a.e.) per acre to control the weeds listed below and most other winter annual grass and broadleaf weeds in established coastal bermudagrass pastures.

Applications prior to spring growth: Apply this product in the late winter or early spring but before new coastal bermudagrass growth begins in the spring. Applications to new growth can damage the bermudagrass.

Applications following the first cutting: Apply this product after the first bermudagrass cutting when the bermudagrass has not yet begun to regrow. Applications made after regrowth has begun can damage the bermudagrass.

Directed application rates totaling 64 fluid ounces (2.25 lbs. a.e.) per acre or less do not require a waiting period between treatment and feeding or livestock grazing.

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

# Colorado, Idaho, Iowa, Kansas, Montana, Nebraska, North Dakota, Oregon, South Dakota, Utah, Washington, and Wyoming Only

Bromus Species: This product may be used to treat downy brome (Bromus tectorum), Japanese brome (Bromus japonicus), soft chess (Bromus mollis) and cheatgrass (Bromus secalinus) found in industrial, rangeland and pasture sites. Apply 8 to 11 fluid ounces of product (0.28 – 0.375 lbs. a.e.) per acre on a broadcast basis. For best results, treatment must coincide with early seedhead emergence of the most mature plants. Delaying the application until this growth stage will maximize the emergence of other weedy grass flushes. Make application to the same site each year until seed banks are depleted and the desirable perennial grasses are able to become reestablished on the site.

Medusahead: To treat medusahead, apply 11 fluid ounces (0.375 lbs. a.e.) of this product per acre as soon as plants are actively growing, and prior to the 4-leaf stage. Applications may be made in the fall or spring.

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

When applied as directed there are no grazing restrictions.

# 11.5 Rangeland

TYPES OF APPLICATION: Postemergence

USE INSTRUCTIONS: This product will control or suppress many annual weeds growing on perennial cool and warm-season grass rangeland. Slight discoloration of the desirable grasses could occur, but will re-green and resume growing under moist soil conditions as effects of this product wear off.

Preventing seed production is critical to the control of invasive annual grassy weeds on rangeland. Follow-up applications in sequential years can be used to eliminate most of the viable seeds. Delay grazing of the area after application of this product to allow desirable perennials to grow, flower and re- seed the area.

Apply 8 to 11 fluid ounces (0.28 to 0.375 lbs. a.e.) of this product per acre to control or suppress many weeds, including downy brome, cheatgrass, cereal rye and jointed goatgrass on rangeland. Apply when most mature brome plants are in early flower and before the plants, including seedheads, turn color. Allowing for secondary weed flushes to occur after spring rains further depletes the seed reserve and encourages perennial grass conversion on weedy sites. Apply this product in the fall in areas where spring moisture is normally limited and fall germination allows for good weed growth and weed seed depletion.

For control of medusahead, apply 11 fluid ounces (0.375 lbs. a.e.) of this product per acre at the 3-leaf stage. Delaying application beyond this stage will result in reduced or unacceptable control. Controlled burning prior to application can be useful in eliminating the thatch layer produced by slowly decaying culms. Allow new growth to occur before applying this product after a burn. Repeat applications in subsequent years are necessary to eliminate the seedbank before re-establishing desirable perennial grasses in medusahead-dominated rangeland.

RESTRICTIONS: Do not apply more than 64 fluid ounces (2.25 lbs. a.e.) of this product per acre per year on rangeland. Do not add ammonium sulfate to the spray mixture when applying this product on rangeland grasses. No waiting period between application and feeding or livestock grazing is required.

# 11.6 Turfgrass Sod Production

LABELED CROPS: Turfgrass for Sod

TYPES OF APPLICATION: Preplant; At-Planting; Preemergence; Renovation; Removal of Established Stand; Site Preparation; Shielded Sprayer; Wiper Applicator; Spot Treatment; Creating Rows in Annual Ryegrass

### Preplant, Preemergence, Renovation, Site Preparation

USE INSTRUCTIONS: This product controls most existing vegetation for purposes of renovating turf grass areas, or for establishing turfgrass grown for sod. Broadcast application of this product may be used to control sod remnants or other unwanted vegetation after sod is harvested. For maximum control of existing vegetation, delay planting until determining if any re-growth of underground plant parts will occur. Where repeat applications are necessary, sufficient re-growth must be attained prior to application. For warm-season grasses, such as bermudagrass, make summer or fall applications. 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.

MAKE APPLICATIONS ACCORDING TO THE RATES LISTED IN "ANNUAL WEEDS RATE TABLE", "PERENNIAL WEEDS RATE TABLE", AND "WOODY BRUSH AND TREES RATE TABLE" IN THIS LABEL.

If application rates total 64 fluid ounces (2.25 lbs. a.e.) per acre or less, no waiting period between treatment and feeding or livestock grazing is required. If the rate is greater than 64 fluid ounces (2.25 lbs. a.e.) per acre, remove domestic livestock and wait 8 weeks following application before grazing or harvesting. Desirable turfgrasses may be planted following the above procedures.

RESTRICTIONS: Do not disturb soil or underground plant before treatment. Delay tillage or renovation techniques such as vertical mowing, coring, or slicing for 7 days after application to allow translocation into underground plant parts.

### **Spot Treatment**

USE INSTRUCTIONS: Apply a 1-percent solution of this product using a handheld sprayer to control weeds within established vegetation prior to heading of grasses grown for seed or to control sod remnants or other unwanted vegetation after sod is harvested.

PRECAUTIONS: This product will kill the desirable grasses along with the weeds. Take care not to spray or allow spray to drift outside the target area in order to avoid unwanted crop destruction.

# **Turfgrass Renovation for Sod Production**

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

Do not disturb soil or underground plant parts before treatment. Delay tillage or renovation techniques such as vertical mowing, coring, or slicing for 7 days after application to allow translocation into underground plant parts.

Desirable turfgrass may be planted following the above procedures.

Hand-held equipment may be used for spot treatment of unwanted vegetation growing in existing turfgrass. Broadcast or hand-held equipment may be used to control sod remnants or other unwanted vegetation after sod is harvested.

RESTRICTION: Do not feed or graze turfgrass grown for seed or sod production for 8 weeks following application

# 11.7 - Release of Bermudagrass or Bahiagrass

(Not for use in California)

### **Dormant Applications**

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

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

Apply 5.3 to 44 fluid ounces (0.19 – 1.5 lbs. a.e.) of this product per acre alone or in a tank mixture with the labeled rate of sulfometuron-methyl. Apply the directed rates in 10 to 40 gallons of water per acre. Use only in areas where bermudagrass or bahiagrass are desirable ground covers and where some temporary injury or discoloration can be tolerated.

To avoid delays in greenup and minimize injury, add no more than 1 ounce (0.047 lb. ai) per acre of sulfometuron-methyl on bermudagrass and no more than 0.5 ounce (0.018 lb. ai) per acre on bahiagrass and avoid treatments when these grasses are in a semi-dormant condition.

# **Actively Growing Bermudagrass**

This product may be used to control or partially control many annual and perennial weeds for effective release of actively growing bermudagrass. Apply 11 to 32 fluid ounces (0.375 – 1.125 lbs. a.e.) of this product in 10 to 40 gallons of spray solution per acre. Use the lower rate when treating annual weeds below 6 inches in height (or runner length). Use the higher rate as weeds increase in size or as they approach flower or seedhead formation. These rates will also provide partial control of the following perennial species:

Bahiagrass Johnsongrass
Bluestem, silver Trumpetcreeper
Fescue, tall Vaseygrass

This product may be tank-mixed with sulfometuron-methyl. If tank-mixed, use no more than 11 to 22 fluid ounces (0.375 – 0.75 lbs. a.e.) of this product with the labeled rate of sulfometuron-methyl per acre. Use the lower rates of each product to control annual weeds less than 6 inches in height (or runner length) that are listed in this label and the sulfometuron-methyl label. Use the higher rates as annual weeds increase in size and approach the flower or seedhead stages. These rates will also provide partial control of the following perennial weeds:

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

Dogtennel Fescue, tall

Use only on well-established bermudagrass. Bermudagrass injury may result from the treatment, but regrowth will occur under moist conditions. Repeat applications of the tank mix in the same season are not recommended, since severe injury may occur.

# **Actively Growing Bahiagrass**

For suppression of vegetative growth and seedhead inhibition of bahiagrass for approximately 45 days, apply 4 fluid ounces (0.14 lbs. a.e.) of this product in 10 to 40 gallons of water per acre. Apply 1 to 2 weeks after full green-up or after mowing to a uniform height of 3 to 4 inches. This application must be made prior to seedhead emergence.

For suppression up to 120 days, apply 2.6 fluid ounces (0.09 lbs. a.e.) of this product per acre, followed by an application of 1.3 to 2.6 fluid ounces (0.045 – 0.09 lbs. a.e.) of this product per acre about 45 days later. Make no more than 2 applications per year.

A tank mixture of this product plus sulfometuron-methyl may be used. Apply 4 fluid ounces (0.14 lbs. a.e.) of this product plus the labeled rate of sulfometuron-methyl per acre 1 to 2 weeks following an initial spring mowing. Make only one application per year.

# 12.0 GLYPHOSATE RESISTANT CROPS

The following instructions include all applications which can be made onto the specified Glyphosate Resistant crops during the complete cropping season. Do not combine these instructions with other recommendations made for crop varieties that do not contain a Glyphosate Resistant gene, in the "ANNUAL AND PERENNIAL CROPS (ALPHA-BETICAL)" section of this label.

THIS PRODUCT IS TO BE USED FOR POSTEMERGENCE APPLICATION ONLY ON CROP VARIETIES DESIGNEATED AS CONTAINING A GLYPHOSATE RESISTANT GENE OR AS GLYPHOSATE TOLERANT.

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

The glyphosate resistant designation indicates that the crop variety contains a patented gene that provides tolerance to this product. Information on glyphosate resistant crop varieties may be obtained from your seed supplier. Glyphosate resistant crop varieties must be purchased from an authorized licensed seed supplier.

NOTE: Glyphosate resistant seed, and the method of selectivity controlling weeds using glyphosate on a glyphosate resistant crop, are protected under U.S. Patents. A license to use glyphosate resistant seed may be required prior to use.

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

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

ATTENTION: AVOID DRIFT. EXTREME CARE MUST BE USED WHEN APPLYING THIS PRODUCT TO PREVENT INJURY TO DESIRABLE PLANTS AND CROPS WHICH DO NOT CONTAIN A GLYPHOSATE TOLERANT 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 of this product with other herbicides, insecticides, fungicides, micronutrients, or foliar fertilizers could result in reduced weed control or crop injury when applied over the top of glyphosate resistant crops. Read the label of all products used in the tank mixture prior to use to determine the potential for crop injury. It is the pesticide user's responsibility to ensure that all products in the listed mixtures are registered for the intended use. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

Willowood Glyphosate, LLC has not tested this product with all tank-mix product formulations for compatibility, antagonism, or performance. To the extent consistent with applicable law, buyer and all users are responsible for any and all loss or damage in connection with the use or handling of mixtures of this product with herbicides or other materials that are not specifically listed on this label or on separate supplemental labeling or Fact Sheets for this product. See the "MIXING" section of this label for more information on tank mixtures.

Ammonium sulfate may be mixed with this product for applications to glyphosate resistant crops. Refer to the "MIXING" section for USE DIRECTIONS 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 recommendations are based on a clean start at planting by using a burndown application or tillage to control existing weeds before crop emergence. In no-till and stale seedbed systems, a preplant burn-down treatment of this product is recommended to control existing weeds prior to crop emergence. Some weeds, such as black nightshade, broadleaf signalgrass, sicklepod, Texas panicum, sandbur, annual morningglory, woolly cupgrass, shattercane, wild proso millet, burcucumber, and giant ragweed with multiple germination times or suppressed (stunted) weeds may require a second application of this product for complete control. Make the second application after some regrowth has occurred and at least 10 days after a previous application of this product.

RESTRICTIONS: REFER TO EACH CROP USE DIRECTIONS FOR MAXIMUM SINGLE AND SEASONAL APPLICATION RATE LIMITS. Maximum application rates apply to the use of this product combined with the use of any and all other herbicides containing glyphosate, whether applied separately or as mixtures. Calculate the application rates (glyphosate acid equivalents) and ensure that the total use of this and other glyphosate-containing products does not exceed the stated maximum rate.

# 12.1 Glyphosate Resistant Alfalfa

TYPES OF APPLICATION: Preplant; At-planting; Preemergence; Postemergence (In-crop)

The glyphosate resistant designation indicates that the alfalfa contains a patented gene, which provides tolerance to this product. Information on glyphosate resistant alfalfa varieties may be obtained from your seed supplier or Willowood Glyphosate, LLC representative. Glyphosate resistant crop varieties must be purchased from an authorized licensed seed supplier.

USE INSTRUCTIONS: This product will control many troublesome emerged weeds with over-the-top applications in glyphosate resistant alfalfa. This product may be applied post-emergence to glyphosate resistant alfalfa from emergence until 5 days prior to cutting. Any single over-the-top applications of this product must not exceed 44 fluid ounces (1.5 lbs. a.e.) per acre.

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

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

Refer to the following table for maximum application rates of this product.

NEW STAND ESTABLISHMENT (Seeding Year)  Application Rates  Prior to First Cutting					
From emergence up to 4 trifoliate leaves 22 to 44 fluid ounces (0.75 to 1.5 lbs. a.e.) per acre					
From 5 trifoliate leaves up to 5 days before first cutting	Up to 44 fluid ounces (1.5 lbs. a.e.) per acre				
After First Cutting					
In-crop application, per cutting, up to 5 days before cutting  Up to 44 fluid ounces (1.5 lbs. a.e.) per acre					

ESTABLISHED STANDS (Non-seeding Year)					
Application Rates					
In-crop applications, per cutting, up to 5 days before cutting	Up to 44 fluid ounces (1.5 lbs. a.e.) per acre				

During stand establishment, due to the biology and breeding constraints of alfalfa, up to 10% of the seedlings may not contain the glyphosate resistant gene and will not survive after the first application of this product. To eliminate the undesirable effects of stand gaps created by the loss of plants not containing a Glyphosate Resistant gene, make a single application of at least 22 fluid ounces (0.75 lbs. a.e.) per acre of this product at or before the 3 to 4 trifoliate growth stage.

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

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

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

Maximum Allowable Application Rate	s
Combined total per year for all applications, including Preplant during year of establishment	170 fluid ounces (6.0 lbs. a.e.) per acre
Preplant, At-planting and Preemergence single application	44 fluid ounces (1.5 lbs. a.e.) per acre
Combined total per year for In-crop application on newly established and established stands	131 fluid ounces (4.6 lbs. a.e.) per acre

See the "GLYPHOSATE RESISTANT CROPS" section of this label for information regarding the use of this product in Glyphosate Resistant crops. See the "PRODUCT INFORMATION" section of this label for more information on Maximum Application Rates.

PRECAUTIONS: Where Glyphosate Resistant 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- non-glyphosate resistant species.

RESTRICTIONS: Do not exceed 44 fluid ounces (1.5 lbs. a.e.) per acre for any single in-crop application of this product. Sequential applications of this product must be a minimum of 7 days apart. The combined total per year for all in-crop applications in both newly established (seeding year) and established stands (non-seeding year) must not exceed 131 fluid ounces (4.6 lbs. a.e.) per acre. Do not apply to frozen or snow covered ground. Remove domestic livestock before application. Wait a minimum of 5 days after application before grazing, or cutting and feeding of forage and hay.

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

The combined total per year for all in-crop applications in newly established and established stands must not exceed 131 fluid ounces (4.6 lbs. a.e.) per acre.

# 12.2 Glyphosate Resistant Canola (Spring Varieties)

LABELED CROPS: Glyphosate resistant spring canola is defined as those glyphosate resistant canola varieties that are seeded in the spring and harvested in the fall and do not enter a winter dormancy period.

DO NOT USE THIS PRODUCT ON SPRING CANOLA WITH A GLYPHOSATE RESISTANT GENE PLANTED IN THE FOLLOWING STATES: ALABAMA, DELAWARE, FLORIDA, GEORGIA, KENTUCKY, MARYLAND, NEW JERSEY, NORTH CAROLINA, SOUTH CAROLINA, TENNESSEE, VIRGINIA, AND WEST VIRGINIA, EXCEPT FOR USES IN WILDLIFE FOOD PLOTS THAT WILL NOT BE FOR HUMAN OR LIVESTOCK FOOD.

TYPES OF APPLICATION: Preplant; At-Planting; Preemergence; Postemergence (In-crop)

USE INSTRUCTIONS: Refer to the following table for the maximum application rates for this product with spring varieties of Glyphosate Resistant canola.

Maximum Application Rates					
Total for all Preplant, At-Planting, Preemergence applications	44 fluid ounces (1.5 lbs. a.e.) per acre				
Total for all In-crop applications from emergence to 6-leaf stage	22 fluid ounces (0.75 lb. a.e.) per acre				

See the "GLYPHOSATE RESISTANT CROPS" section of this label for information regarding the use of this product in Glyphosate Resistant crops. See the "PRODUCT INFORMATION" section of this label for more information on Maximum Application Rates.

### Preplant, At-Planting, Preemergence

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

RESTRICTIONS: Maximum quantity of this product that may be applied for all preplant, at-planting and preemergence applications combined is 44 fluid ounces (1.5 lbs. a.e.) per acre per year.

### Postemergence (In-crop)

USE INSTRUCTIONS: This product may be applied postemergence (in-crop) to spring varieties of Glyphosate Resistant canola from emergence through the 6-leaf stage of development, unless otherwise directed. Application made during bolting or flowering could result in crop injury and yield loss. To maximize yield potential, eliminate competing weeds early.

<u>Single Application</u> – Apply 11 to 16 fluid ounces (0.375 to 0.56 lbs. a.e.) of this product per acre no later than the 6-leaf stage for the control of annual weeds. Avoid overlapping applications as this could result in temporary yellowing, delayed flowering, and/or growth reduction. Similar crop injury could result when more than 11 fluid ounces (0.375 lbs. a.e.) per acre is applied after the 4-leaf stage.

Sequential Application – Apply 11 fluid ounces (0.375 lbs. a.e.) of this product per acre to 1- to 3-leaf canola followed by a sequential application at a minimum interval of 10 days, but no later than the 6-leaf stage. Sequential application works better for control of early emerging annual and perennial weeds, such as Canada thistle and quackgrass, or whenever more than one application is needed for acceptable weed control.

RESTRICTIONS: No more than two in-crop (over-the-top) broadcast applications may be made from crop emergence through the 6-leaf stage of development and the total in-crop application must not exceed 22 fluid ounces (0.75 lbs. a.e.) of this product per acre. Allow a minimum of 60 days between application and canola harvest.

# 12.3 Glyphosate Resistant Canola (Fall & Winter Varieties)

LABELED CROPS: Glyphosate Resistant winter canola is defined as those Glyphosate Resistant canola varieties that are seeded in early-fall and harvested the following spring or summer. Winter canola varieties are intended to enter a cold period dormancy in the winter.

TYPES OF APPLICATION: Preplant; At-Planting; Preemergence; Postemergence (In-crop)

USE INSTRUCTIONS: Refer to the following table for the maximum application rates of this product with winter varieties of Glyphosate Resistant canola.

							Maximum	<b>Application Rate</b>	es
Total for all Preplant, At-Planting, Preemergence applications							44 fluid ounces (1.5 lbs. a.e.) per acre		
Total for all In-crop applications from emergence to canopy closure or prior to bolting in the spring							44 fluid ounces (1.5 lbs. a.e.) per acre		

See the "GLYPHOSATE RESISTANT CROPS" section of this label for information regarding the use of this product in Glyphosate Resistant crops. See the "PRODUCT INFORMATION" section of this label for more information on Maximum Application Rates.

# Preplant, At-Planting, Preemergence

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

RESTRICTIONS: Maximum quantity of this product that may be applied for all pre-plant, at-planting and pre-emergence applications combines is 44 fluid ounces (1.5 lbs. a.e.) per acre per year.

# Postemergence (In-crop)

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

Some weeds with multiple germination times, or suppressed (stunted) weeds, or weeds that have overwintered, might need a sequential application of this product for control. Make the second application after some re-growth has occurred and a minimum of 60 days after the initial application of this product.

<u>Single Application</u> – Apply 16 to 22 fluid ounces (0.56 to 0.75 lbs. a.e.) of this product per acre in the fall when weeds are small and actively growing. Use a higher rate within this range when weed densities are high, when weeds have overwintered or when weeds become large and well established. Application of more than 16 fluid ounces (0.56 lbs. a.e.) per acre prior to the 6-leaf stage could result in reduced crop growth in the fall. Avoid spray overlaps as this could result in temporary yellowing and/ or growth reduction.

Sequential Application – Apply 11 to 22 fluid ounces (0.375 to 0.75 lbs. a.e.) of this product per acre to 2-leaf or larger canola in the fall, followed by a sequential application at the same rate and at a minimum interval of 60 days, but before bolting in the spring. Sequential application works best for control of early emerging annual weeds and winter emerging weeds, such as downy brome, jointed goatgrass and ryegrass, and for weeds that have overwintered. This product will control or suppress most perennial weeds. For some perennial weeds, a sequential application might be needed to reduce competition with the crop.

RESTRICTIONS: No more than two over-the-top broadcast applications may be made from crop emergence up to the onset of bolting and the total in-crop application must not exceed 44 fluid ounces (1.5 lbs. a.e.) of this product per acre. Applications of greater than 16 fluid ounces (0.56 lbs. a.e.) per acre prior to the 6-leaf stage may result in reduced crop growth in the fall. Allow a minimum of 60 days between application and harvest of canola grain. No waiting period is required between application and open grazing of livestock.

# 12.4 Glyphosate Resistant Corn Hybrids

TYPES OF APPLICATION: Preplant; At-Planting; Preemergence; Postemergence (In-crop); Pre-Harvest; Post-Harvest

Maximum Allowable Application Rates					
Combined total per year for all applications	170 fluid ounces (6.0 lbs. a.e.) per acre				
Total for all Preplant, At-Planting, Preemergence applications	105 fluid ounces (3.75 lbs. a.e.) per acre				
Total for all In-crop applications from emergence through 48-inch corn	64 fluid ounces (2.25 lbs. a.e.) per acre				
Maximum Preharvest application rate after maximum kernel fill is complete and the crop is physiologically mature (black layer formation) until 7 days before harvest	22 fluid ounces (0.75 lbs. a.e.) per acre				

See the "GLYPHOSATE RESISTANT CROPS" section of this label for information regarding the use of this product in Glyphosate Resistant crops. See the "PRODUCT INFORMATION" section of this label for more information on Maximum Application Rates.

#### Preplant, At-Planting, Preemergence

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

MAKE APPLICATIONS ACCORDING TO THE RATES LISTED IN "ANNUAL WEEDS RATE TABLE", "PERENNIAL WEEDS RATE TABLE", AND "WOODY BRUSH AND TREES RATE TABLE" IN THIS LABEL.

TANK MIXTURES: This product may be tank-mixed with the following products. Apply these tank mixtures in 10 to 20 gallons of water or 10 to 60 gallons of nitrogen solution per acre. Ensure that the product used is labeled for application to field corn. It is the pesticide user's responsibility to ensure that all products in the listed mixtures are registered for the intended use. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

2,4-D; acetochlor; atrazine; bicyclopyrone; carfentrazone-ethyl; clopyralid; dicamba; diflufenzopyr; dimethenamid; dimethenamid-p; flufenacet; flumetsulam; flumiclorac pentyl ester; isoxaflutole; linuron; mesotrione; metolachlor; s-metolachlor; metribuzin; pendimethalin; rimsulfuron; saflufenacil; simazine; thiencarbazone-methyl

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

RESTRICTIONS: Applying this product to crop varieties that are not designated as glyphosate tolerant 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 a Glyphosate Resistant or glyphosate tolerant gene, since severe injury or destruction will result.

AVOID DRIFT. EXTREME CARE MUST BE USED WHEN APPLYING THIS PRODUCT TO PREVENT INJURY TO DESIRABLE PLANTS AND CROPS WHICH DO NOT CONTAIN A GLYPHOSATE TOLERANT GENE.

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

Application of 2,4-D or dicamba must be made a minimum of 7 days prior to planting.

### Postemergence (In-crop)

USE INSTRUCTIONS: This product may be applied alone or in tank mixtures over the top of corn hybrids with Roundup Ready 2 Technology, including Roundup Ready 2 and products displaying the Roundup Ready 2 Technology logo, from emergence through the V8 stage (8 leaves with collars) or until corn height reaches 30 inches, whichever comes first. Drop nozzles are recommended for optimum spray coverage and weed control when corn height is 24 to 30 inches. For corn heights 30 to 48 inches (free standing), apply this product ONLY using ground application equipped with drop nozzles aligned to avoid spraying into the whorls of the corn plants.

When applied as directed, this product controls labeled annual grass and broadleaf weeds in Glyphosate Resistant corn. Many perennial grasses and broadleaf weeds will be controlled or suppressed with one or more application of this product. Make a post-emergent application of 16 to 22 fluid ounces (0.56 - 0.75 lbs. a.e.) per acre of this product before the weeds reach a height and/or density that the weeds become competitive with the crop, 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 to 22 fluid ounces  $(0.56 - 0.75 \, lbs. \, a.e.)$  per acre will control the labeled grasses and broadleaf weeds.

TANK MIXTURES: This product may be tank-mixed with the following products. Ensure that the product used is labeled for application postemergence (in-crop) to field corn. Read and follow label directions for all products in the tank mixture. It is the pesticide user's responsibility to ensure that all products in the listed mixtures are registered for the intended use. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

2,4-D; acetochlor; atrazine; bicyclopyrone; carfentrazone-ethyl; clopyralid; dicamba; diflufenzopyr; flumetsulam; flumiclorac pentyl ester; foramsulfuron; halosulfuronmethyl; iodosulfuron-methylsodium; isoxaflutole; mesotrione; nicosulfuron; rimsulfuron; tembotrione; thiencarbazone-methyl; thifensulfuron methyl; topramezone

See the "GLYPHOSATE RESISTANT CROPS" section of this label for precautionary instructions for use in Glyphosate Resistant crops. Allow a minimum of 10 days between in-crop applications of this product.

RESTRICTIONS: Allow a minimum of 50 days between application of this product and harvest of corn forage. Single in-crop applications of this product up to 49- inch corn must not exceed 32 fluid ounces (1.125 lbs. a.e.) per acre. Sequential in-crop applications of this product from emergence through 48 inches in height must not exceed 64 fluid ounces(2.25 lbs. a.e.) per acre per year.

## **Postemergence With Drop Nozzles**

USE INSTRUCTIONS: For Glyphosate Resistant corn from emergence through the V8 stage (8 leaves with collars) or until corn height reaches 30 inches, whichever comes first, this product may be applied over-the-top broadcast or with drop nozzles. When corn height is 24 to 30 inches (free standing), for optimum spray coverage and weed control drop nozzles are recommended. For corn heights 30 to 48 inches (free standing), apply this product only using ground application equipment with drop nozzles adjusted to avoid spraying into the whorls of the corn plants.

Single in-crop applications of this product must not exceed 22 fluid ounces (0.75 lbs. a.e.) per acre.

The maximum combined total of multiple in-crop applications from emergence through the 48-inch stage is 1 3/8 quart (44 fluid ounces) (1.5 lbs. a.e.) per acre.

If product is applied to whorls of corn, plant injury and yield reduction can occur.

#### **Pre-Harvest**

USE INSTRUCTIONS: Up to 22 fluid ounces (0.75 lbs. a.e.) of this product per acre may be applied pre-harvest. Make application when kernel fill is complete and the corn is physiologically mature (black layer formed) and grain moisture is 35 percent or less.

RESTRICTIONS: Allow a minimum of 7 days between application and harvest or feeding of corn stover or grain.

#### Post-Harvest

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

RESTRICTIONS: Allow a minimum of 7 days between application and harvest or the feeding of vegetation within the application area.

# 12.5 Glyphosate Resistant Cotton

ATTENTION: USE OF THIS P RODUCT IN ACCORDANCE WITH LABEL DIRECTIONS IS EXPECTED TO RESULT IN NORMAL GROWTH OF GLYPHOSATE RESISTANT COTTON, HOWEVER, VARIOUS ENVIRONMENTAL CONDITIONS, AGRONOMIC PRACTICES AND OTHER FACTORS MAKE IT (MPOSSIBLE 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.

TYPES OF APPLICATION: Preplant; At-Planting; Preemergence; Postemergence (In-crop); Selective Equipment (In-crop); Preharvest

Maximum Application Rates	
Combined total per year for all applications	170 fluid ounces (6.0 lbs. a.e.) per acre
Total for all Preplant, At-Planting, Preemergence applications	105 fluid ounces (3.75 lbs. a.e.) per acre
Total for all In-crop applications from cracking to layby	80 fluid ounces (3.0 lbs. a.e.) per acre
Maximum Preharvest application rate	44 fluid ounces (1.5 lbs. a.e.) per acre
Combined total for all In-crop applications from emergence through harvest	128 fluid ounces (4.5 lbs. a.e.) per acre

See the "GLYPHOSATE RESISTANT CROPS" section of this label for information regarding the use of this product in Glyphosate Resistant crops. See the "PRODUCT INFORMATION" section of this label for more information on Maximum Application Rates.

#### Preplant, At-Planting, Preemergence

USE INSTRUCTIONS: This product may be applied before, during or after planting Glyphosate Resistant cotton.

MAKE APPLICATIONS ACCORDING TO THE RATES LISTED IN "ANNUAL WEEDS RATE TABLE", "PERENNIAL WEEDS RATE TABLE", AND "WOODY BRUSH AND TREES RATE TABLE" IN THIS LABEL.

TANK MIXTURES: This product may be tank-mixed with 2,4-D or Clarity and applied prior to planting only. This product may be tank-mixed with the following products and applied prior to crop emergence. It is the pesticide user's responsibility to ensure that all products in the listed mixtures are registered for the intended use. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

acetochlor; clomazone; diuron; flumioxazin; fluometuron; fomesafen; metolachlor; s-metolachlor; norflurazon; pendimethalin; prometyrn; pyrithiobac-sodium; saflufenacil

### Postemergence (Over-the-Top)

USE INSTRUCTIONS: This product may be applied by aerial or ground application equipment at rates of up to 22 fluid ounces (0.75 lbs. a.e.) per acre per application from cracking until the 4-leaf (node) stage of development (until the fifth true leaf reaches the size of a quarter). Over-the-top applications made after the 4-leaf (node) stage of development may result in boll loss, delayed maturity and/or yield loss.

**Salvage Treatment** – may be made after the 4-leaf stage of development and only when weeds threaten to cause the loss of the crop. Apply 22 fluid ounces (0.75 lbs. a.e.) of this product per acre either as an over-the-top application or as a post-directed application sprayed higher on the cotton plants and onto the weeds.

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

TANK MIXTURES: This product may be tank-mixed with the following products and applied over the top of Glyphosate Resistant cotton up to the 4-leaf stage. It is the pesticide user's responsibility to ensure that all products in the listed mixtures are registered for the intended use. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

acetochlor; clethodim; fluazifop-P-butyl; fomesafen; metolachlor; s-metolachlor; monosodium acid methanearsonate; pyrithiobac-sodium; quizalofop-P-ethyl; sethoxydim; trifloxysulfuron-sodium

RESTRICTIONS: Maximum quantity of this product that may be applied for all in-crop applications from cracking to layby combined is 80 fluid ounces (3.0 lbs. a.e.) per acre per year. Allow a minimum of 7 days between application and harvest of cotton.

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 MAY BE MADE FROM THE 5-LEAF STAGE THROUGH LAYBY. SEQUENTIAL IN-CROP OVER-THE-TOP OR POST-DIRECTED APPLICATIONS OF THIS PRODUCT MUST BE A MINIMUM OF 10 DAYS APART AND COTTON MUST HAVE AT LEAST TWO NODES OF INCREMENTAL GROWTH BETWEEN APPLICATIONS.

#### **Selective Equipment**

USE INSTRUCTIONS: This product may be applied using precision post-directed or hooded sprayers at rates of up to 22 fluid ounces (0.75 lbs. a.e.) per acre per application to Glyphosate Resistant cotton through layby. At this crop stage, use post-directed application equipment to direct the spray towards the base of the cotton plants, avoiding contact of the herbicide spray with the leaves of the plant. To minimize contact, maintain a low spray pressure (less than 30 pounds per square inch) and place nozzles in a low position directing a horizontal spray pattern under the leaves of the cotton plant and onto the weeds in the row. Apply this product while weeds are small (less than 3 inches in height). See additional use instructions in the "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label.

TANK MIXTURES: This product may be tank-mixed with the following products for in-crop application using precision post-directed or hooded sprayers. It is the pesticide user's responsibility to ensure that all products in the listed mixtures are registered for the intended use. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

acetochlor; carfentrazone-ethyl; diuron; flumioxazin; fluometuron; fomesafen; linuron; metolachlor; monosodium acid methanearsonate; pendimethalin; prometyrn; pyrithiobac-sodium; trifloxysulfuron-sodium

#### **Preharvest**

USE INSTRUCTIONS: This product may be applied for pre-harvest annual and perennial weed control as a broadcast treatment to Glyphosate Resistant cotton after 20 percent boil crack. Up to 44 fluid ounces (1.5 lbs. a.e.) of this product per acre may be applied using either aerial or ground equipment.

REFER TO MANUFACTURERES LABELS FOR USE OF ADDITIVES (such as surfactants, stickers, and spreaders) FOR PREHARVEST APPLICATION TO COTTON.

TANK MIXTURES: This product may be tank mixed with harvest aids containing the following active ingredients: S,S,S-tributyl phosphorotrithioate, thidiazuron, or ethephon. It is the pesticide user's responsibility to ensure that all products in the listed mixtures are registered for the intended use. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

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

RESTRICTIONS: Do not apply this product to cotton grown for seed, as a reduction in germination or vigor could occur. Allow a minimum of 7 days between application and harvest of cotton.

# 12.6 Glyphosate Resistant Flex Cotton

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

TYPES OF APPLICATION: Preplant; At-Planting; Preemergence; Postemergence (Over-the-Top); Preharvest

USE INSTRUCTIONS: Refer to the following table for maximum application rates of this product with Glyphosate Resistant Flex cotton.

Maximum Allowable Application Rates					
Combined total per year for all applications	170 fluid ounces (6.0 lbs. a.e.) per acre				
Total for all Preplant, At-Planting, Preemergence applications	105 fluid ounces (3.75 lbs. a.e.) per acre				
Total for all In-crop applications from cracking to 60 percent open bolls	128 ounces (4.5 lbs. a.e.) per acre				
Total for all In-crop applications between layby and 60 percent open bolls	44 fluid ounces (1.5 lbs. a.e.) per acre				
Total for all In-crop applications from 60 percent open bolls to 7 days prior to harvest	44 fluid ounces (1.5 lbs. a.e.) per acre				
Total for all In-crop applications from emergence through harvest	128 ounces (4.5 lbs. a.e.) per acre				

See the "GLYPHOSATE RESISTANT CROPS" section of this label for information regarding the use of this product in Glyphosate Resistant crops. See the "PRODUCT INFORMATION" section of this label for more information on Maximum Application Rates.

### Preplant, At-Planting, Preemergence

USE INSTRUCTIONS: This product may be applied before, during or after planting Glyphosate Resistant Flex cotton. Always plant into a weed free seedbed. In no-till and stale seedbed systems, always burn down existing weeds before cotton emerges.

MAKE APPLICATIONS ACCORDING TO THE RATES LISTED IN "ANNUAL WEEDS RATE TABLE", "PERENNIAL WEEDS RATE TABLE", AND "WOODY BRUSH AND TREES RATE TABLE" IN THIS LABEL.

TANK MIXTURES: This product may be tank-mixed with 2,4-D or Clarity and applied prior to planting only. This product may be tank-mixed with the following products and applied prior to crop emergence. It is the pesticide user's responsibility to ensure that all products in the listed mixtures are registered for the intended use. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

acetochlor; clomazone; diuron; flumioxazin; fluometuron; fomesafen; metolachlor; s-metolachlor; norflurozon; pendimethalin; prometyrn; pyrithiobac-sodium; saflufenacil

#### Postemergence (Over-the-top)

USE INSTRUCTIONS: This product may be applied to control annual grasses and broadleaf weeds listed on this label in Glyphosate Resistant Flex cotton. To maximize yield potential, eliminate competing weeds early. Many perennial weeds will be controlled or suppressed with one or more applications of this product.

Use an initial application rate of 22 fluid ounces (0.75 lbs. a.e.) per acre to control or suppress 1- to-3 inch tall annual grasses and broadleaf weeds. This product may be applied postemergence to Glyphosate Resistant Flex cotton using ground application equipment at rates up to 32 fluid ounces (1.125 lbs. a.e.) per acre per application. In addition to broadcast application, post-directed spray equipment may be used to achieve more thorough weed coverage.

IN THE STATES OF ARIZONA, NEW MEXICO, AND TEXAS (WEST OF I-35) ONLY, up to 44 fluid ounces (1.5 lbs. a.e.) of this product per acre may be applied per postemergence application using ground application equipment.

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

TANK MIXTURES: This product may be tank-mixed with the following products and applied postemergence (in-crop) over the top. It is the pesticide user's responsibility to ensure that all products in the listed mixtures are registered for the intended use. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

acetochlor; clethodim; fluazifop-P-butyl; fomesafen; metolachlor; s-metolachlor; monosodium acid methanearsonate; pyrithiobac-sodium; quizalofop-p-ethyl; sethoxydim; trifloxysulfuron-sodium

Application after 10th leaf or 10th node may result in plant injury and yield loss.

RESTRICTIONS: The maximum single, in-crop application rate of this product to Glyphosate Resistant Flex cotton using ground application equipment is 32 fluid ounces (1.125 lbs. a.e.) per acre, except in Arizona, New Mexico, and west Texas (west of I-35 only), where up to 44 fluid ounces (1.5 lbs. a.e.) per acre may be applied in a single application using ground application equipment. In-crop application rates above 22 fluid ounces (0.75 lbs. a.e.) per acre made alone or with the addition of other crop chemical products containing surfactant could cause a crop response including leaf speckling or leaf necrosis. Do not exceed a maximum single, in-crop application rate of 22 fluid ounces (0.75 lbs. a.e.) of this product per acre when using aerial application equipment, except in Arizona, New Mexico, and west Texas (west of I-35 only), where up to 32 fluid ounces (1.125 lbs. a.e.) may be applied as a single application using aerial application equipment. Between layby and 60 percent open bolls, the maximum combined total application rate of this product is 44 fluid ounces (1.5 lbs. a.e.) per acre. The combined total for all applications of this product made from crop emergence to 60 percent open bolls must not exceed 128 fluid ounces (4.5 lbs. a.e.) per acre.

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

#### **Preharvest**

USE INSTRUCTIONS: Up to 44 fluid ounces (1.5 lbs. a.e.) of this product per acre may be applied to Glyphosate Resistant Flex cotton for annual and perennial weed control prior to harvest after 60 percent boll crack.

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

RESTRICTIONS: Allow a minimum of 7 days between application and harvest of Glyphosate Resistant Flex cotton. Do not apply this product to cotton grown for seed, as a reduction in germination or vigor may occur.DO NOT ADD ADDITIONAL SURFACTANT OR ADDITIVES CONTAINING SURFACTANT TO THIS PRODUCT FOR PREHARVEST APPLICATION TO GLYPHOSATE RESISTANT FLEX COTTON.

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

# 12.7 Glyphosate Resistant Soybeans

[THE USE OF THIS PRODUCT FOR IN-CROP APPLICATIONS OVER GLYPHOSATE RESISTANT SOYBEANS MAY NOT BE PRACTICED IN CALIFORNIA UNLESS THE APPLICATOR HAS AT THE TIME OF APPLICATION A CALIFORNIA APPROVED SUPPLEMENTAL LABEL SPECIFYING THE ACCEPTED DIRECTION FOR USE.]

TYPES OF APPLICATION: Preplant; At-Planting; Preemergence; Postemergence (In-crop); Preharvest; Post-Harvest

USE INSTRUCTIONS: Refer to the following table for maximum application rates of this product with Glyphosate Resistant soybean.

Maximum Allowable Application Rates					
Combined total per year for all applications	170 fluid ounces (6.0 lbs. a.e.) per acre				
Total for all Preplant, At-Planting, Preemergence applications	105 fluid ounces (3.75 lbs. a.e.) per acre				
Total for all In-crop applications from cracking through flowering (R2 stage soybean)	64 fluid ounces (2.25 lbs. a.e.) per acre				
Maximum Preharvest application rate	22 fluid ounces (0.75 lbs. a.e.) per acre				

See the "GLYPHOSATE RESISTANT CROPS" section of this label for information regarding the use of this product in Glyphosate Resistant crops. See the "PRODUCT INFORMATION" section of this label for more information on Maximum Application Rates.

#### Preplant, At-Planting, Preemergence

USE INSTRUCTIONS: This product may be applied before, during or after planting Glyphosate Resistant soybean.

MAKE APPLICATIONS ACCORDING TO THE RATES LISTED IN "ANNUAL WEEDS RATE TABLE", "PERENNIAL WEEDS RATE TABLE", AND "WOODY BRUSH AND TREES RATE TABLE" IN THIS LABEL.

TANK MIXTURES: This product may be tank-mixed with 2,4-D or dicamba and applied prior to planting only. This product may be tank-mixed with the following products and applied prior to crop emergence. It is the pesticide user's responsibility to ensure that all products in the listed mixtures are registered for the intended use. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

acetochlor; carfentrazone-ethyl; chlorimuron ethyl; clethodim; clomazone; cloransulam-methyl; dimethenamid; dimethenamid-p; fenoxyprop-p-ethyl; fluazifop-p-butyl; flufenacet; flumetsulam; flumiclorac pentyl ester; flumioxazin; fluthiacet-methyl; fomesafen; imazaquin; imazethapyr; lactofen; linuron; metolachlor; s-metolachlor; metribuzin; pendimethalin; pyroxasulfone; quizalofop P-ethyl; saflufenacil; sulfentrazone; tribenuron methyl; trifluralin

#### Postemergence (In-crop)

USE INSTRUCTIONS: This product may be used to control annual grasses and broadleaf weeds in Glyphosate Resistant soybean from emergence (cracking) through flowering (R2 stage soybean). R2 stage soybean ends when a pod 5 millimeters (3/16 inch) long appears at one of the four uppermost nodes on the main stem with a fully developed leaf (R3 stage). Refer to the "ANNUAL WEEDS RATE TABLE" of this label for application rates for specific annual weeds.

An initial application of 22 fluid ounces (0.75 lbs. a.e.) of this product per acre will control or suppress most 2- to 8-inch tall weeds, which are normally found approximately 2 to 5 weeks after planting. If the initial application is delayed and weeds are larger, apply a higher label rate of this product. This product may be applied up to 44 fluid ounces (1.5 lbs. a.e.) per acre as a single, in- crop application for control of annual weeds and where dense weed populations exist.

Application of 22 to 44 fluid ounces (0.75 to 1.5 lbs. a.e.) of this product per acre (single or multiple applications) will control or suppress perennial weeds, including bermudagrass, Canada thistle, common milkweed, field bindweed, hemp dogbane, horsenettle, marestail (horseweed), nutsedge, quackgrass, rhizome johnsongrass, redvine, trumpetcreeper, swamp smartweed and wirestem multly. Allow perennial weed species to achieve at least 6 inches of growth before applying this product.

Under adverse growing conditions, including drought, hail or wind damage, or a poor soybean stand that slows or delays canopy closure, a sequential application of this product might be necessary to control late flushes of weeds. IN THE SOUTHERN STATES, A SEQUENTIAL APPLICATION OF THIS PRODUCT WILL BE NEEDED TO CONTROL NEW FLUSHES OF WEEDS IN THE GLYPHOSATE RESISTANT SOYBEAN CROP. To control giant ragweed, apply 22 fluid ounces (0.75 lbs. a.e.) of this product per acre when the weed is 8 to 12 inches tall to increase control and possibly avoid the need for a sequential application.

RESTRICTIONS: The combined total application of this product from crop emergence through harvest must not exceed 64 fluid ounces (2.25 lbs. a.e.) per acre. The maximum rate for any single in-crop application is 44 fluid ounces per acre. The maximum combined total amount of this product that may be applied during flowering (R2 stage soybean) is 44 fluid ounces per acre.

#### **Preharvest**

USE INSTRUCTIONS: Apply by aerial or ground application up to 22 fluid ounces (0.75 lbs. a.e.) of this product per acre to Glyphosate Resistant soybean for weed control prior to harvest after pods have set and lost all green color. Take care to avoid excessive seed shatter loss due to ground application equipment.

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

#### Post-Harvest

USE INSTRUCTIONS: This product may be applied for weed control after harvest of Glyphosate Resistant soybean. Higher label rates might be needed for control of large weeds that were growing in the field at the time of harvest. Tank mixtures with 2,4-D or dicamba may be used. It is the pesticide user's responsibility to ensure that all products in the listed mixtures are registered for the intended use. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

# 12.11 Glyphosate Resistant Sugar Beets

The Glyphosate Resistant designation indicates that the sugar beet contains a patented gene, which provides tolerance to this product. Information on Glyphosate Resistant sugar beet may be obtained from your seed supplier or Willowood Glyphosate, LLC representative. Glyphosate Resistant crop varieties must be purchased from an authorized licensed seed supplier.

Do NOT combine these instructions with other recommendations made for crop varieties that do not contain a Glyphosate Resistant gene listed in the "ANNUAL AND PERENNIAL CROPS (Alphabetical)" sections of this label.

TYPES OF APPLICATION: Preplant; At-Planting; Preemergence; Postemergence (In-crop)

USE INSTRUCTIONS: Refer to the following table for maximum application rates of this product with Glyphosate Resistant sugar beet.

Maximum Application Rates					
Combined total per year for all applications	170 fluid ounces (6.0 lbs. a.e.) per acre				
Total for all Preplant, At-Planting, Preemergence applications	105 fluid ounces (3.75 lbs. a.e.) per acre				
Maximum single application rate from emergence to 8-leaf stage	32 fluid ounces (1.125 lbs. a.e.) per acre				
Total for all applications made from emergence to 8-leaf stage	56 fluid ounces (2.0 lbs. a.e.) per acre				
Total for all applications made between 8-leaf stage and canopy closure	44 fluid ounces (1.5 lbs. a.e.) per acre				

See the "GLYPHOSATE RESISTANT CROPS" section of this label for information regarding the use of this product in Glyphosate Resistant crops. See the "PRODUCT INFORMATION" section of this label for more information on Maximum Application Rates.

#### Preplant, At-Planting, Preemergence

USE INSTRUCTIONS: This product may be applied before, during or after planting Glyphosate Resistant sugar beet.

MAKE APPLICATIONS ACCORDING TO THE RATES LISTED IN "ANNUAL WEEDS RATE TABLE", "PERENNIAL WEEDS RATE TABLE", AND "WOODY BRUSH AND TREES RATE TABLE" IN THIS LABEL.

TANK MIXTURES: This product may be tank-mixed with ethofumesate and applied prior to crop emergence. It is the pesticide user's responsibility to ensure that all products in the listed mixtures are registered for the intended use. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

RESTRICTIONS: The maximum quantity of this product that may be applied for all preplant, at-planting and preemergence applications combined is 105 fluid ounces (3.75 lbs. a.e.) per acre per year.

#### Postemergence (In-crop)

USE INSTRUCTIONS: This product may be applied over the top of Glyphosate Resistant 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. Up to 4 applications of this product may be made with a minimum of 10 days between each application. This product will control or suppress most perennial weeds. For some perennial weeds, more than one application might be needed to eliminate crop competition throughout the growing season. Refer to the "ANNUAL WEEDS RATE TABLE" and "PERENNIAL WEEDS RATE TABLE" in this label for application rates for specific weeds.

TANK MIXTURES: This product may be tank-mixed with the following products and applied postemergence (in-crop) over the top of Glyphosate Resistant sugar beet. It is the pesticide user's responsibility to ensure that all products in the listed mixtures are registered for the intended use. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

clethodim; clopyralid; desmedipham; dimethenamid-p; ethofumesate; s-metolachlor; phenmedipham; quizalofop-p-ethyl; trisulfuron-methyl

RESTRICTIONS: The combined total application of this product from crop emergence through harvest must not exceed 96 fluid ounces (3.375 lbs. a.e.) per acre. The maximum rate for any single application from crop emergence until the 8-leaf stage is 32 fluid ounces (1.125 lbs. a.e.) per acre. The maximum rate for any single application between the 8-leaf stage and canopy closure is 22 fluid ounces (0.75 lbs. a.e.) per acre. Allow a minimum of 30 days between application and sugar beet harvest.

# 13.0 NON-CROP USES AROUND THE FARMSTEAD

TYPES OF USES: Farmstead Weed Control; Trim-and-Edge; Greenhouse/Shadehouse; Chemical Mowing; Cut Stump Application; Habitat Management.

#### RESTRICTIONS:

- DO NOT apply more than 224 fluid ounces (8.0 lbs. a.e.) per acre in a single application if using ground equipment.
- DO NOT apply more than 224 fluid ounces (8.0 lbs. a.e.) per acre in a single application if using aerial equipment.
- DO NOT apply more than 224 fluid ounces (8.0 lbs. a.e.) per acre per year for all applications.

# 13.1 Weed Control & Trim-and-Edge

TYPES OF APPLICATION: Any suitable application equipment described in Section 8.0 of this label.

USE INSTRUCTIONS: This product may be used to control annual and perennial weeds, woody brush, trees, and vines found on any part of non-crop areas of the farmstead including around building foundations and equipment storage areas, along and in fences, in dry ditches and canals, along ditch banks, driveways, farm roads, farmyards, fencerows, parking areas, rangeland, rights-of-way, shelterbelts, storage areas and prior to landscape plantings.

MAKE APPLICATIONS ACCORDING TO THE RATES LISTED IN "ANNUAL WEEDS RATE TABLE", "PERENNIAL WEEDS RATE TABLE", AND "WOODY BRUSH AND TREES RATE TABLE" IN THIS LABEL.

For annual weeds, apply 22 fluid ounces (0.75 lbs. a.e.) of this product per acre when weeds are less than 6 inches tall, 32 fluid ounces (1.125 lbs. a.e.) when weeds are 6 to 12 inches tall and 44 fluid ounces (1.5 lbs. a.e.) when weeds are greater than 12 inches tall. For perennial weeds, apply 44 fluid ounces to 105 fluid ounces (1.5 to 3.75 lbs. a.e.) per acre in a tank-mix with one of the products listed here. For application of tank mixtures using a backpack sprayer, handgun, or other handheld applicator. See the "HAND-HELD AND HIGH VOLUME EQUIPMENT" section of this label for directed rates.

TANK MIXTURES: This product may be tank-mixed with the following products, provided that the product used is labeled for these sites and uses. It is the pesticide user's responsibility to ensure that all products in the listed mixtures are registered for the intended use. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

2,4-D; atrazine; bromacil; chlorosulfuron; dicamba; diuron; imazapic; imazapyr; metsulfuron-methyl; oryzalin; oxadiazon; pendimethalin; prodiamine; simazine; sulfometuron-methyl

For control or partial control of the following perennial weeds, apply 22 to 44 fluid ounces (0.75 – 1.5 lbs. a.e.) of this product plus the labeled rate of sulfometuron-methyl herbicide per acre.

Bahiagrass Fescue, tall
Bermudagrass Johnsongrass
Broomsedge Poorjoe
Dallisgrass Quackgrass
Dock, curly Vaseygrass
Dogfennel Vervain, blue

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

#### 13.2 Greenhouse/Shadehouse

TYPES OF APPLICATION: Spot Spray, Directed Spray

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

MAKE APPLICATIONS ACCORDING TO THE RATES LISTED IN "ANNUAL WEEDS RATE TABLE", "PERENNIAL WEEDS RATE TABLE", AND "WOODY BRUSH AND TREES RATE TABLE" IN THIS LABEL.

PRECAUTIONS: Remove desirable vegetation before applying this product inside a greenhouse or shadehouse.

RESTRICTIONS: Turn air circulation fans off before applying this product inside a greenhouse or shadehouse and until the application solution has dried. Desirable vegetation must not be present during application. Do not use inside residential greenhouses.

## 13.3 Chemical Mowing

LABELED USES: Farm ditches and other parts of farmsteads.

TYPES OF APPLICATION: Any suitable application equipment described in Section 8.0 of this label.

USE INSTRUCTIONS: This product may be used to suppress growth of perennial grasses listed in this section along farm ditches and on any other part of the farmstead to serve as a substitute for mowing. Apply 4 fluid ounces (0.14 lbs. a.e.) of this product per acre to suppress Kentucky bluegrass; apply 5 fluid ounces of this product (0.19 lbs. a.e.) per acre when treating tall fescue, fine fescue, orchardgrass or quackgrass covers; 11 fluid ounces (0.375 lbs. a.e.) to suppress bermudagrass; or 44 fluid ounces (1.5 lbs. a.e.) to suppress torpedograss or para grass. Make all applications in 10 to 20 gallons of spray solution per acre.

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

# 13.4 Cut Stumps

TYPES OF USES: Treating brush and tree stumps on any terrestrial site.

TYPES OF APPLICATION: Suitable Hand-Held Equipment

USE INSTRUCTIONS: This product may be used to control re-growth and re-sprouting of many species of woody brush and trees. Cut the woody brush or tree close to the soil surface and immediately apply a 50- to 100-percent (undiluted) solution of this product to the freshly cut surface using application equipment capable of covering the entire cambium. A delay in application could result in reduced performance. Cut the woody brush or tree during period of active growth and full leaf expansion and apply this product. Some of the species controlled by this method of application of this product are:

Alder Oak Reed, giant Tan oak Eucalyptus Pepper, Brazilian Saltcedar Willow

Madrone Pine, Austrian Sweetgum

PRECAUTIONS: Some sprouts, stems, or trees can share a common root system. Adjacent trees having a similar age, height and spacing could be an indicator of a shared root system. Whether grafted or shared, injury is likely to occur to adjacent stems or trees when this product is applied to one or more trees sharing a common root system.

# 13.5 Habitat Management

TYPES OF USES: Habitat Restoration and Maintenance: Wildlife Food Plots

TYPES OF APPLICATION: Any suitable application equipment described in Section 8.0 of this label.

MAKE APPLICATIONS ACCORDING TO THE RATES LISTED IN "ANNUAL WEEDS RATE TABLE", "PERENNIAL WEEDS RATE TABLE", AND "WOODY BRUSH AND TREES RATE TABLE" IN THIS LABEL.

USE INSTRUCTIONS: This product may be used to control exotic and other undesirable vegetation in habitat management areas. Application may be made to allow recovery of native plant species or prior to planting desirable native species, and for similar broad-spectrum vegetation control in habitat management areas. Spot treatment may be used to selectively remove unwanted plants for habitat maintenance.

This product may be used to eliminate 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 a minimum of 7 days after application before tilling.

# 14.0 FORESTRY, INDUSTRIAL, TURF & ORNAMENTAL

RESTRICTIONS:

- DO NOT apply more than 224 fluid ounces (8.0 lbs. a.e.) per acre in a single application if using ground equipment.
- DO NOT apply more than 224 fluid ounces (8.0 lbs. a.e.) per acre in a single application if using aerial equipment.
- DO NOT apply more than 224 fluid ounces (8.0 lbs. a.e.) per acre per year for all applications.

# 14.1 Forestry Site Preparation

TYPES OF APPLICATION: Boom Sprayers, Shielded Boom Sprayers, High-Volume Off-Center Nozzles, Hand-Held Equipment, And Similar Equipment

USE INSTRUCTIONS: This product may be used for the control or partial control of woody brush, trees, and herbaceous weeds in forestry. This product may also be used in preparing or establishing wildlife openings with these sites and maintaining logging roads.

MAKE APPLICATIONS ACCORDING TO THE RATES LISTED IN "ANNUAL WEEDS RATE TABLE", "PERENNIAL WEEDS RATE TABLE", AND "WOODY BRUSH AND TREES RATE TABLE" IN THISLABEL.

This product may be used in site preparation prior to planting any tree species, including Christmas trees, eucalyptus, hybrid tree cultivars and silvicultural nursery sites.

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

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

TANK MIXTURES: This product may be applied in a tank-mix with the products listed in this section to increase the spectrum of vegetation controlled. Any application rate of this product listed on this label may be used in a tank-mix with the following products for tree site management, including site preparation, provided that the product is labeled for the use on the site of application and prior to planting the desired species. It is the pesticide user's responsibility to ensure that all products in the listed mixtures are registered for the intended use. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

NOTE: For forestry site preparation, make sure the tank-mix product is approved for use prior to planting the desired species. Observe planting interval restrictions.

imazapyr; metsulfuron methyl; sulfometuron methyl; triclopyr

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

RESTRICTION: Do not apply this product as an over-the-top broadcast spray for forestry conifer or hardwood release unless otherwise specified on this label.

# 14.2 Non-Crop Areas & Industrial Sites

LABELED USES: Non-crop areas including airports, apartment complexes, Christmas tree farms, commercial sites, Conservation Reserve Program (CRP) areas, ditch banks, dry ditches, dry canals, fencerows, gold courses, greenhouses, industrial sites, landscape areas, lumber yards, manufacturing sites, municipal sites, natural areas, office complexes, ornamentals, parks, parking areas, pastures, petroleum tank farms and pumping installations, plant nurseries, public areas, railroads, rangeland, recreational areas, residential areas, rights-of-way, roadsides, schools, sod or turf seed farms, sports complexes, storage areas, substations, turfgrass areas, utility sites, warehouse areas, and wildlife management areas.

TYPES OF APPLICATION: This product may be applied with any suitable application equipment described in Section 8.0 of this label.

USE INSTRUCTIONS: This product may be used to trim-and-edge around objects in non-crop sites, for spot treatment of unwanted vegetation and to eliminate unwanted weeds growing in established shrub beds or ornamental plantings. This product may be used prior to planting an area to ornamentals, flowers, turfgrass (sod or seed), or prior to laying asphalt or beginning construction projects.

MAKE APPLICATIONS ACCORDING TO THE RATES LISTED IN "ANNUAL WEEDS RATE TABLE", "PERENNIAL WEEDS RATE TABLE", AND "WOODY BRUSH AND TREES RATE TABLE" IN THIS LABEL.

Repeated applications of this product may be used, as weeds emerge, to maintain bare ground.

TANK MIXTURES: This product may be tank mixed with the following herbicides provided that the specific product is registered for use on the target site. It is the pesticide user's responsibility to ensure that all products in the listed mixtures are registered for the intended use. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

2,4-D; atrazine; bromacil; chlorsulfuron; clopyralid; dicamba; diuron; fosamine; hexazinone; imazapic; imazapyr; metsulfuron methyl; oryzalin; oxadiazon; pendimethalin; picloram; prodiamine; simazine; sulfometuron; sulfosulfuron; triclopyr

When applied as a tank mixture for bare ground, this product provides control of the emerged annual weeds and control of partial control of emerged perennial weeds, woody brush, and trees.

For control or partial control of the following perennial weeds, apply 22 to 44 fluid ounces (0.75 – 1.5 lbs. a.e.) of this product plus the labeled rate of sulfometuron-methyl herbicide per acre.

BahiagrassDock, curlyPoorjoeBermudagrassDogfennelQuackgrassBroomsedgeFescue, tallVaseygrassDallisgrassJohnsongrassVervain, blue

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

# 14.3 Injection & Frill (Woody brush & Trees)

LABELED USES: Woody brush and trees in non-crop areas.

TYPES OF APPLICATION: Injection or Frill Applications

USE INSTRUCTIONS: Apply this product using suitable equipment which must penetrate into the living tissue. Apply the equivalent of 1 mL of this product per each 2 to 3 inches of trunk diameter at breast height (DBH). This is best achieved by applying a 50 to 100 percent concentration of this product either to a continuous frill around the tree or as cuts evenly spaced around the tree below all branches. As tree diameter increases in size, better results are achieved by applying diluted material to a continuous frill or more closely spaced cuttings.

For best results, apply during periods of active growth and after full leaf expansion. This product will control many species, some of which are listed below:

ControlPartial ControlOakBlack gumPoplarDogwoodSweetgumHickorySycamoreMaple, red

#### 14.4 Hollow Stem Injection

LABELED USES: Hollow stem plants growing in any non-crop site specified on this label.

TYPES OF APPLICATION: Hand-Held Injection Devices That Deliver Directed Amounts of This Product

USE INSTRUCTIONS: For control of the following hollow-stem plants, use the application rates below:

## Japanese Knotweed, Polygonum cuspidatum

Inject 5mL per stem of this product between second and third internode.

#### Bohemian Knotweed, Polygonum bohemicum

Inject 5mL per stem of this product between the second and third internode.

### Giant Hogweed, Hercleum mantegazzianum

Inject one leaf cane per plant 12 inches above the root brown with 5 mL of a 5% v/v solution of this product.

#### Poison Hemlock, Conium maculatum

Inject one leaf cane per plant 10 to 12 inches above the root crown with 5 mL of a 5% v/v solution of this product.

#### Field horsetail. Equisetum arvense

Inject one segment above the root crown with 0.5 mL per stem of this product. Use a small syringe that calibrates to this rate.

#### Canada Thistle, Circisum arvense

Cut 8 to 9 of the tallest plants at bud stage in a clump with clippers. Use a cavity needle that is pushed into the stem center and then slowed removed as 0.5 mL per stem of this product is injected into the stem.

At 5 mL per stem, 150 fluid ounces will treat approximately 1,300 stems per acre.

RESTRICTIONS: The combined total for all treatments must not exceed 150 fluid ounces (5.25 lbs. a.e.) of this product per acre.

## 14.5 Ornamentals, Plant Nurseries & Christmas Trees

LABELED USES: Plant nurseries, Christmas Tree farms, & other non-food tree production sites.

TYPES OF APPLICATION: Post-Directed, Trim and Edge, Site Preparation, Wiper Application

PRECAUTION: Care must be taken to avoid contact of spray, drift of mist with foliage or green bark of desirable ornamental species.

RESTRICTION: Unless otherwise directed, this product is not for use as an over-the top broadcast spray in ornamentals and Christmas trees.

## Post-Directed, Trim-and Edge

This product may be used as a post-directed spray around established woody ornamental species (including arborvitae, azalea, boxwood, crabapple, eucalyptus, euonymus, fir, Douglas fir, jojoba, hollies, lilac, magnolia, maple, oak, polar, privet, pine, spruce, and yew, growing in plant nurseries, on Christmas tree farms, or on other non-food tree production sites), or to trim and edge around trees, buildings, sidewalks, roads, potted plants, and other objects in a production setting.

MAKE APPLICATIONS ACCORDING TO THE RATES LISTED IN "ANNUAL WEEDS RATE TABLE", "PERENNIAL WEEDS RATE TABLE", AND "WOODY BRUSH AND TREES RATE TABLE" IN THIS LABEL.

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

#### **Site Preparation**

This product may be used prior to planting any tree, shrub, or vine, including Christmas tree species, in a nursery or production setting.

## **Wiper Application**

This product may be used through wick or other suitable wiper applicators to control or partially control undesirable vegetation around established trees, shrubs, or vines. See the "SELECTIVE EQUIPMENT' section of this label for further information about the proper use of wiper applicators.

## 14.6 Parks. Recreational & Residential Areas

LABELED USES: Around Trees, Fences, Paths, Driveways, Around Buildings, Patios, Sidewalks, Flower Beds, Around Shrubs and other Ornamental Plants

TYPES OF APPLICATION: Trim and Edge, Spot Treatment, Site Preparation, Lawn Renovation

PRECAUTION: Care must be taken to avoid contact of spray, drift of mist with foliage or green bark of desirable ornamental species.

RESTRICTION: Do not use for spot weed control in lawns since desirable lawn grass will also be killed.

#### **Trim and Edge, Spot Treatment**

This product may be used to eliminate unwanted weeds growing in areas listed above.

Use suitable hand-held equipment for directed spraying according to instructions in Section 7.3 "MIXING FOR HAND-HELD SPRAYERS". Spray only when air is calm.

If necessary, use cardboard or plastic to shield desirable plants.

## Site Preparation, Lawn Renovation

This product may be used prior to planting an area to ornamentals, flowers, turfgrass (sod or seed), lawn renovation or prior to laying asphalt or beginning construction projects.

MAKE APPLICATIONS ACCORDING TO THE RATES LISTED IN "ANNUAL WEEDS RATE TABLE", "PERENNIAL WEEDS RATE TABLE", AND "WOODY BRUSH AND TREES RATE TABLE" IN THIS LABEL.

For best results, apply when daytime temperatures are at least 60° F. Do not mow for 7 days before or after treatment. Soil may be tilled, fertilized, and seeded 7 days after application.

#### 14.7 Railroads

LABELED USES: Railroads right-of-way, railroad ballast areas.

TYPES OF APPLICATION: Boom Sprayers, Shielded Boom Sprayers, High-Volume Off-Center Nozzles, Hand-Held Equipment

USE INSTRUCTIONS: All of the instructions in the "NONCROP AREAS AND INDUSTRIAL SITES" section apply to railroads.

MAKE APPLICATIONS ACCORDING TO THE RATES LISTED IN "ANNUAL WEEDS RATE TABLE", "PERENNIAL WEEDS RATE TABLE", AND "WOODY BRUSH AND TREES RATE TABLE" IN THIS LABEL.

This product may be used to maintain bare ground on railroad ballast and shoulders. Repeat applications of this product may be used, as weeds emerge, to maintain bare ground. This product may be used to control tall-growing weeds to improve line-of-sight at railroad crossings and reduce the need for mowing along rights-of-way. For crossing applications, up to 80 gallons of spray solution per acre may be used.

TANK MIXTURES: This product may be tank mixed with the following products for ballast, shoulder, spot, bare ground and crossing treatments provided that the specific product is registered for use on such sites. It is the pesticide user's responsibility to ensure that all products in the listed mixtures are registered for the intended use. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

2,4-D; atrazine; bromacil; chlorsulfuron; clopyralid; dicamba; diquat; diuron; hexazinone; imazapyr; metsulfuron methyl; pelargonic acid; simazine; sulfometuron methyl; sulfosulfuron; triclopyr

#### **Brush Control**

This product may be used to control woody brush and trees on railroad rights-of-way. Apply 80 to 224 fluid ounces of this product (3.0 – 8.0 lbs. a.e.) per acre as a broadcast spray, using boom-type or boomless nozzles. Up to 80 gallons of spray solution per acre may be used. Apply a 3/4 to 2 percent solution of this product when using high-volume spray-to-wet applications. Apply a 5 to 10 percent solution of this product when using low volume directed sprays for spot treatment. This product may be mixed with the following products for enhanced control of woody brush and trees:

chlorsulfuron; clopyralid; dicamba; fosamine; hexazinone; imazapyr; metsulfuron methyl; picloram; triclopyr

## 14.8 Roadsides

LABELED USES: Roadsides right-of-way areas (including shoulders, guardrails, and signposts)

TYPES OF APPLICATION: Boom Sprayers, Shielded Boom Sprayers, High-Volume Off-Center Nozzles, Hand-Held Equipment, and similar equipment.

USE INSTRUCTIONS: All the instructions in the "NONCROP AREAS AND INDUSTRIAL SITES" section apply to roadsides.

MAKE APPLICATIONS ACCORDING TO THE RATES LISTED IN "ANNUAL WEEDS RATE TABLE", "PERENNIAL WEEDS RATE TABLE", AND "WOODY BRUSH AND TREES RATE TABLE" IN THIS LABEL.

This product may be used on road shoulders, under guardrails and around signposts and other objects along roadsides that may be obstacles to mowing.

TANK MIXTURES: This product may be tank-mixed with the following products for shoulder, guardrail, spot, and bare ground treatments provided that the product used is labeled for use on these sites. It is the pesticide user's responsibility to ensure that all products in the listed mixtures are registered for the intended use. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

2,4-D; atrazine; bromacil; chlorsulfuron; clopyralid; dicamba; diuron; fosamine; hexazinone; imazapic; imazapyr; metsulfuron methyl; oryzalin; oxadiazon; pendimethalin; picloram; prodiamine; simazine; sulfometuron; sulfosulfuron; triclopyr

#### **Spot Treatment**

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

Observe application precautions in Section 8.0. Avoid application to nontarget plants due to drift, overspray, or runoff.

## 14.9 Utility Management

LABELED USES: Electrical Power, Pipeline And Telephone Rights-Of-Way, And In Other Sites Associated With These Rights-Of-Way, Including Substations, Roadsides, or Railroads That Run In Conjunction With Utilities.

TYPES OF APPLICATION: Boom Sprayers, Shielded Boom Sprayers, High-Volume Off-Center Nozzles, Hand-Held Equipment, and similar equipment.

USE INSTRUCTIONS: This product may be used in utility sites and substations to control unwanted vegetation and to eliminate unwanted weeds growing in established shrub beds or ornamental plantings. This product may be used prior to planting a utility site to ornamentals, flowers, turfgrass (sod or seed), or beginning construction projects.

MAKE APPLICATIONS ACCORDING TO THE RATES LISTED IN "ANNUAL WEEDS RATE TABLE", "PERENNIAL WEEDS RATE TABLE", AND "WOODY BRUSH AND TREES RATE TABLE" IN THIS LABEL.

Repeated applications of this product may be used, as weeds emerge, to maintain bare ground.

This product can also be used when preparing or establishing wildlife openings within these sites, maintaining access roads and for side trimming along utility rights-of-way.

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

TANK MIXTURES: This product may be tank-mixed with the following herbicides for use on utility sites, provided that the product used is labeled for use on these sites. It is the pesticide user's responsibility to ensure that all products in the listed mixtures are registered for the intended use. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

For control of herbaceous weeds, use a lower application rate or spray solution concentration within the given ranges for these tank-mix products and increase the rate or concentration toward the higher end of the ranges for control of dense stands or hard-to-control woody brush, trees, and vines.

2,4-D; atrazine; bromacil; chlorsulfuron; clopyralid; dicamba; diuron; fosamine; hexazinone; imazapic; imazapyr; metsulfuron methyl; oryzalin; pendimethalin; prodiamine; simazine; sulfometuron methyl; sulfosulfuron; triclopyr

Ensure that triclopyr is thoroughly mixed with water according to label directions before adding this product to the spray mixture. Maintain continuous agitation when adding this product in order to avoid tank-mix incompatibility problems. For enhanced results with side-trimming, apply this product in a tank-mix with triclopyr.

Observe application precautions in Section 8.0.

PRECAUTIONS: Avoid application to nontarget plants due to drift, overspray, or runoff.

# 15.0 ANNUAL WEEDS RATE TABLE (ALPHABETICAL BY SPECIES)

USE WATER CARRIER VOLUMES OF 3 AND 10 GALLONS PER ACRE FOR GROUND APPLICATION, AND BETWEEN 3 AND 5 GALLONS PER ACRE FOR AERIAL APPLICATION

- Apply to actively growing annual weeds. Annual weeds are often easiest to control when they are small.
- Control of older, mature (hardened) or otherwise hard-to-control annual weed species could require higher application rates than specified in this table, even if they
  meet the size requirements listed.
- Do not tank-mix this product with soil residual herbicides when applying at these rates, unless otherwise directed.
- For weeds that have been mowed, grazed, or cut, allow regrowth to occur prior to treatment.
- This product may be applied at rates of up to 44 fluid ounces (1.5 lbs. a.e.) per acre for hard-to-control annual weeds and where dense weed populations exist.

## **ANNUAL WEEDS RATE TABLE**

	Application Rate (fluid ounces per acre)						
	11	16	22	27	32		
	(0.375 lbs. a.e.)	(0.56 lbs. a.e.)	(0.75 lbs. a.e.)	(0.94 lbs. a.e.)	(1.125 lbs. a.e.)		
Weed Species		Maxii	num Height/Length (in	ches)			
Ammannia, purple	3	6	12	-	18		
Anoda, spurred	-	2	3	5	8		
Barley	18	18 +	-	-	-		
Barnyardgrass	-	3	6	7	9		
Bassia, fivehook	-	-	6	-	-		
Beggarweed, Florida	-	5	8	-	-		
Bittercress	12	20	-	-	-		
Bluegrass, annual	10	-	-	-	-		
Bluegrass, bulbous	6	-	-	-	-		
Brome, downy 1,2	6	12	-	-	-		
Brome, Japanese	6	12	24	-	-		
Browntop panicum	6	8	12	-	24		
Buckwheat, wild <sup>3</sup>	-	1	2	-	-		
Burcucumber	-	6	12	-	18		
Buttercup	12	20	-	-	-		
Carolina geranium	-	-	4	-	9		
Carpetweed	-	6	12	-	-		
Cheat <sup>2</sup>	6	20	-		-		
Chervil	20	-	-	-	-		
Chickweed	-	12	18	-	-		

# ANNUAL WEEDS RATE TABLE (cont.)

	Application Rate (fluid ounces per acre)									
	11 16 22 27 3									
	(0.375 lbs. a.e.)	(0.56 lbs. a.e.)	(0.75 lbs. a.e.)	(0.94 lbs. a.e.)	(1.125 lbs. a.e.)					
Weed Species	Maximum Height/Length (inches)									
Cocklebur	12	18	24	-	36					
Copperleaf, hophornbeam	-	2	4	-	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	-	-					
Owarf dandelion	12	-	-	-	-					
Eastern mannagrass	8	12	-	-	-					
Eclipta	-	4	8	12	-					
Fall panicum	4	-	6	-	12					
Falsedandelion	-	20	-	-	-					
Falseflax, smallseed	12	-	-	-	-					
Fiddleneck	-	6	12							
Field pennycress	6	12	-	-	-					
Filaree	-	-	6		12					
Teabane, annual	6	20	-		-					
Fleabane, hairy ( <i>Conyza bonariensis</i> )		-	6		10					
Fleabane, rough	3	6	12	-	-					
Florida pusley	-	-	4	-	6					
Foxtail; giant, bristly, yellow	6	12	20	-	-					
Foxtail, Garolina	10			<u>-</u>						
		-	-	-	-					
Foxtail, green	12		-	-	-					
Goatgrass, jointed	6	12	-	-	-					
Goosegrass	-	3	6	-	12					
Grain sorghum (milo)	6	12	20	-	-					
Groundcherry	-	3	6	-	9					
Groundsel; common, cressleaf	-	6	10	-	-					
Hemp sesbania	-	2	4	6	8					
Henbit	-	-	6	-	12					
Horseweed/ Marestail ( <i>Conyza canadensis</i> )	-	6	12	-	18					
tchgrass	6	8	12	-	18					
limsonweed	-	-	12	-	18					
Johnsongrass, seedling	6	12	18	-	24					
Junglerice	-	3	6	7	9					
Knotweed	-	-	6	-	12					
Kochia 4	-	3 to 6	12	-	-					
ambsquarters	-	6	12	-	20					
Little barley	6	12	-	-	-					
ondon rocket	6	-	24	-	-					
Mayweed	-	2	6	12	18					
Morning glory, annual ( <i>lpomoea</i> spp.)	-	-	3	-	6					
Mustard; blue, tansy, tumble, wild	6	12	18	-	-					
Nightshade; black, hairy	-	4	6	-	12					

# **ANNUAL WEEDS RATE TABLE (cont.)**

	Application Rate (fluid ounces per acre)									
	11 16 22 27 32									
	(0.375 lbs. a.e.)	(0.56 lbs. a.e.)	(0.75 lbs. a.e.)	(0.94 lbs. a.e.)	(1.125 lbs. a.e.)					
Weed Species		Maxi	mum Height/Length (ii	nches)						
Oats	3	6	18	-	-					
Pigweed, Palmer	-	12	18	24	-					
Pigweed species	-	12	18	24	-					
Prickly lettuce	-	6	12	-	-					
Purslane	-	-	3	-	6					
Ragweed, common, giant	-	6	12	-	18					
Red rice	-	-	4	-	-					
Rye, volunteer/cereal <sup>2</sup>	6	18	18 +	-	-					
Ryegrass species	-	-	6	-	12					
Sandbur, field	6	12	-	-	-					
Sandbur, longspine	6	12	-	-	-					
Shattercane	6	12	20	-	-					
Shepherdspurse	6	12	-	-	-					
Sicklepod	-	2	4	-	8					
Signalgrass, broadleaf	-	3	6	7	9					
Smartweed, ladysthumb	-	-	6		9					
Smartweed, Pennsylvania	-	-	6	-	9					
Sowthistle, annual	-	-	6	-	12					
Spanishneedles	-	-	6	-	-					
Speedwell, purslane	12	-	-	-	-					
Sprangletop	6	12	20	-	-					
Spurge; prostrate, spotted	-	6	12	-	-					
Spurry, umbrella	6	-	-	-	-					
Stinkgrass	-	12	-	-	-					
Sunflower	12	18	-	-	-					
Swinecress	-	5	12	-	-					
Teaweed/ Prickly sida	-	2	4	-	6					
Texas panicum	6	8	12	-	24					
Thistle, Russian <sup>5</sup>	-	6	12	-	-					
Velvetleaf	-	-	6	-	12					
Virginia pepperweed	-	18	-	-	-					
Waterhemp	-	-	6	-	12					
Wheat <sup>2</sup>	6	12	18	-	-					
Wheat (overwintered)	-	6	12	-	18					
Wild oats	3	6	18	-	-					
Wild proso millet	-	6	12	-	18					
Witchgrass	-	12	-	-	-					
Woolly cupgrass	-	6	12	-	-					
Yellow rocket	-	12	20	-	-					

 $<sup>^{1}</sup>$ For control of downy brome in no-till systems, apply 16 fluid ounces (0.56 lbs. a.e.) of this product per acre.

<sup>&</sup>lt;sup>2</sup> Make application before this weed reaches the boot stage of growth.

<sup>&</sup>lt;sup>3</sup> Apply 16 fluid ounces (0.56 lbs. a.e.) of this product per acre to control wild buckwheat in the cotyledon to 2-leaf stage. Apply 22 fluid ounces (0.75 lbs. a.e.) per acre to control 2- to 4-leaf wild buckwheat. For control of wild buckwheat over 2 inches in size, make sequential applications of 22 fluid ounces (0.75 lbs. a.e.) followed by 22 fluid ounces (0.75 lbs. a.e.) of this product per acre.

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

<sup>&</sup>lt;sup>5</sup> Control of Russian thistle can vary based on environmental conditions and spray coverage. If possible, apply this product in a tank mixture with 2,4-D, as described in the following section, to improve control. It is the pesticide user's responsibility to ensure that all products in the listed mixtures are registered for the intended use. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

# 15.1 Annual Weeds-Handheld Sprayers or High-Volume Equipment

For control of weeds listed in the "ANNUAL WEEDS RATE TABLE," apply a 0.4-percent solution of this product to weeds less than 6 inches in height or runner length prior to seed head formation in grasses or bud formation in broadleaf weeds. For control of annual weeds over 6 inches tall, or unless otherwise directed, use a 0.7-percent solution.

For hard-to-control perennials, such as bermudagrass, dock, field bindweed, hemp dogbane, milkweed, and Canada thistle, apply a 1.5-percent solution of this product.

When using application methods that result in less than complete coverage, apply a 4-percent solution of this product for control of annual and perennial weeds, and a 4- to 7-percent solution for control of woody brush, trees, and vines.

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

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

Application of 16 to 20 fluid ounces (0.56 to 0.65 lbs. a.e.) of this product, plus the labeled rate of atrazine, per acre will control the following weeds: barnyardgrass (requires 20 fluid ounces (0.65 lbs. a.e.) of this product per acre for control), downy brome, green foxtail, lambsquarters, prickly lettuce, tansy mustard, pigweed, field sandbur, stinkgrass, Russian thistle, volunteer wheat, witchgrass and kochia (add the labeled rate of dicamba per acre for control). Ensure that the atrazine and dicamba products are labeled for the intended use and application site. Follow all precautions and limitations on the tank-mix product label, including any application timing restrictions, soil restrictions, minimum re-cropping intervals and crop rotation restrictions.

# 16.0 PERENNIAL WEEDS RATE TABLE (ALPHABETICAL 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 recommended stages.

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

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

Do not treat when weeds are under drought stress as good soil moisture is necessary for active growth.

## PERENNIAL WEEDS RATE TABLE

WEED SPECIES	RATE (FL OZ/A)	WATER VOL. (GPA)	HAND-HELD % SOL.	COMMENTS
Alfalfa	32 – 48 (1.125 – 1.7 lbs. a.e.)	3-10	1.5%	Apply after last hay cutting in the fall and alfalfa has re-grown to a height of 6 to 8 inches or more. Follow with deep tillage after a minimum of 7 days after application, but before soil freeze-up.
Alligator Weed	96 (3.375 lbs. a.e.)	3-20	1%	For partial control, apply this product when most target plants are in bloom. More than one application will be needed to achieve control.
Anise (Fennel)	-	-	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
Bahaigrass	64 - 105 (2.25 – 3.75 lbs. a.e.)	3-20	1.5%	Apply when most plants have reached the early head stage.
Bentgrass	32 (1.125 lbs. a.e.)	10-20	1.5%	For suppression in grass seed production areas using ground application equipment only. Ensure entire crown area has resumed growth prior to application in the fall. Ensure that bentgrass has at least 3 inches of growth before application. Avoid tillage prior to application, wait 7 to 10 days after application.
Bermudagrass	64 - 105 (2.25 – 3.75 lbs. a.e.)	3-20	1.5%	For control, apply 105 fluid ounces (3.75 lbs. a.e.) of this product per acre when bermudagrass is actively growing and seedheads are present. More than one application might be necessary to achieve control. For partial control, apply 64 fluid ounces (2.25 lbs. a.e.) per acre.
Bermudagrass, water (Knotgrass)	22 – 32 (0.75 – 1.125 lbs. a.e.)	5-10	1.5%	Apply 32 fluid ounces (1.125 lbs. a.e.) of this product in 5 to 10 gallons of water per acre when water bermudagrass is 12 to 18 inches in length. Allow a minimum of 7 days after application before tilling, flushing, or flooding the field. For fall application, till fallow fields and apply 22 fluid ounces (0.75 lbs. a.e.) of this product in 5 to 10 gallons of water per acre prior to frost and when water bermudagrass is 12 to 18 inches in length. This product is not registered in the State of California for control of water bermudagrass.

WEED SPECIES	RATE (FL OZ/A)	WATER VOL. (GPA)	HAND-HELD % SOL.	COMMENTS
Bindweed, Field	12.8 – 105 (0.45 – 3.75 lbs. a.e.)	3-20	1.5%	Do not apply this product when field bindweed is under drought stress, as good soil moisture is necessary for active growth and efficacy of this product.  For control, apply 80 to 105 fluid ounces (3.0 to 3.75 lbs. a.e.) of this product per acre west of the Mississippi River and 64 to 80 fluid ounces (2.25 to 3.0 lbs. a.e.) per acre east of the Mississippi River when bindweed is at or beyond full bloom. Apply in late-summer or fall. Fall application must be made before a killing frost.  Also, for control, apply 44 fluid ounces (1.5 lbs. a.e.) of this product, plus the labeled rate of dicamba, in 10 to 20 gallons of water per acre. Do not apply this mixture using aerial application equipment.  For suppression on irrigated agricultural land, apply 22 to 44 fluid ounces (0.75 to 1.5 lbs. a.e.) of this product, plus the labeled rate of 2,4-D, in 10 to 20 gallons of water per acre using ground application equipment only. Application may be made following harvest or on fallow ground in the fall when bindweed is actively growing and the majority of runners are 12 inches or more in length. Irrigate at least once to promote active bindweed growth.  For suppression, apply 11 fluid ounces (0.375 lbs. a.e.) of this product, plus the labeled rate of 2,4-D, in 3 to 10 gallons of water per acre using ground application equipment, or in 3 to 5 gallons of water per acre using aerial application equipment. Application of this tank-mix using aerial equipment is only allowed on fallow fields and in reduced tillage systems. Delay application until maximum emergence has occurred and vines are 6 to 18 inches in length.  In California only, apply 22 to 105 fluid ounces (0.75 to 3.75 lbs. a.e.) of this product per acre. Actual rate needed for suppression or control will vary within this range depending on local conditions. For suppression or control will vary within this range depending on local conditions. For suppression or irrigated land where annual tillage is performed, apply 22 fluid ounces (0.75 lbs. a.e.) of this product. Allow
Bluegrass, Kentucky	22 – 48 (0.75 – 1.7 lbs. a.e.)	3-40	1.5%	Apply 44 fluid ounces (1.5 lbs. a.e.) of this product in 10 to 40 gallons of water per acre when most plants have reached the boot to early-seed head stage of development. For partial control in pasture or hay crop renovation, apply 22 to 32 fluid ounces (0.75 to 1.125 lbs. a.e.) of this product in 3 to 10 gallons of water per acre to actively growing target plants when most have reached 4 to 12 inches in height.
Blueweed, Texas	64 - 105 (2.25 – 3.75 lbs. a.e.)	3-40	1.5%	Apply 80 to 105 fluid ounces (3.0 to 3.75 lbs. a.e.) of this product per acre west of the Mississippi River or 64 to 80 fluid ounces (2.25 to 3.0 lbs. a.e.) per acre east of the Mississippi River when plants are at or beyond full bloom. Apply in late-summer or fall. Fall application must be made before a killing frost.
Brackenfern	64 - 96 (2.25 – 3.375 lbs. a.e.)	3-40	1 – 1.5%	Make application to fully expanded fronds that are at least 18 inches long.
Bromegrass, smooth	22 – 48 (0.7579 – 1.7 lbs. a.e.)	3 – 40	1.5%	Apply 44 fluid ounces (1.5 lbs. a.e.) of this product in 10 to 40 gallons of water per acre when most target plants have reached boot to early-seed head stage of development. For partial control in pasture or hay crop renovation, apply 22 to 32 fluid ounces (0.75 to 1.125 lbs. a.e.) of this product in 3 to 10 gallons of water per acre to actively growing bromegrass when it has reached a height of 4 to 12 inches.
Bursage, woolly-leaf	-	3 – 20	1.5%	For control, apply 44 fluid ounces (1.5 lbs. a.e.) of this product plus the labeled rate of dicamba per acre when plants are producing new active growth that has been initiated by moisture for at least 2 weeks and are at or beyond flowering. For partial control, apply 22 fluid ounces (0.75 lbs. a.e.) of this product plus the labeled rate dicamba per acre.
Canarygrass, reed	48 – 64 (1.7 – 2.25 lbs. a.e.)	3 – 40	1.5%	For best results, apply when most plants have reached the boot-to-head stage of growth.  (continued)

WEED SPECIES	RATE (FL OZ/A)	WATER VOL. (GPA)	HAND-HELD % SOL.	COMMENTS
Cattail	64 - 105 (2.25 – 3.75 lbs. a.e.)	3 – 40	1.5%	Apply when most plants have reached the early head stage.
Clover; red, white	64 - 105 (2.25 – 3.75 lbs. a.e.)	3 – 20	1.5%	Also, for control, apply 11 to 22 fluid ounces (0.375 to 0.75 lbs. a.e.) of this product, plus the labeled rate of 2,4-D, in 3 to 10 gallons of water per acre.
Cogongrass	64 - 105 (2.25 – 3.75 lbs. a.e.)	10-40	1.5%	Apply in late-summer or fall when cogongrass is at least 18 inches tall. Due to uneven stages of growth and the dense nature of this vegetation preventing good spray coverage, more than one application might be necessary to achieve control.
Dallisgrass	64 - 105 (2.25 – 3.75 lbs. a.e.)	3 – 20	1.5%	Apply when most plants have reached the early head stage.
Dandelion	64 - 105 (2.25 – 3.75 lbs. a.e.)	3 – 40	1.5%	Also, for control, apply 11 fluid ounces (0.375 lbs. a.e.) of this product, plus the labeled rate of 2,4-D, in 3 to 10 gallons of water per acre.
Dock, curly	64 - 105 (2.25 – 3.75 lbs. a.e.)	3 – 40	1.5%	Also, for control, apply 11 to 22 fluid ounces (0.375 to 0.75 lbs. a.e.) of this product, plus the labeled rate of 2,4-D, in 3 to 10 gallons of water per acre.
Dogbane, hemp	96 (3.375 lbs. a.e.)	3 – 40	1.5%	Apply when most target plants have reached the late-bud to flower stage of development. Allow weeds to re-grow to a mature stage prior to application of this product after crop harvest or mowing. Apply in late-summer or fall. For suppression, apply 11 fluid ounces (0.375 lbs. a.e.) of this product, plus the labeled rate of 2,4-D, in 3 to 10 gallons of water per acre using ground application equipment, and in 3 to 5 gallons of water per acre using aerial application equipment. Delay application until maximum emergence of hemp dogbane has occurred.
Fescue (except tall)	64 - 105 (2.25 – 3.75 lbs. a.e.)	3-20	1.5%	Apply when most plants are in the early head stage.
Fescue, tall	22 -64 (0.75 – 2.25 lbs. a.e.)	3 – 40	1.5%	Apply 64 fluid ounces (2.25 lbs. a.e.) of this product per acre when most tall fescue has reached the boot to early- seed head stage of development.  For fall application, apply 22 fluid ounces (0.75 lbs. a.e.) of this product in 3 to 10 gallons of water per acre when plants have 6 to 12 inches of new growth. A sequential application of 11 fluid ounces (0.375 lbs. a.e.) of this product per acre will improve long-term control and will control seedlings germinating after fall application or in the following spring.
Guineagrass	48 -64 (1.7 – 2.25 lbs. a.e.)	3-40	1%	Apply when most target plants have reached the 7-leaf stage of growth. Ensure thorough coverage when using a handheld sprayer. In Texas and the ridge of Florida, apply 44 fluid ounces (1.5 lbs. a.e.) of this product per acre for control. In the flatwoods region of Florida, 64 fluid ounces (2.25 lbs. a.e.) per acre is needed for control.
Horsenettle	64 - 105 (2.25 – 3.75 lbs. a.e.)	3 – 20	1.5%	Apply when most plants are in the early bud stage.
Horseradish	96 (3.375 lbs. a.e.)	3 – 40	1.5%	Apply when most plants have reached the late-bud to flower stage of growth. Apply in late-summer or fall.
Iceplant	-	-	1.5%	Thoroughly cover of the target weed with this product.
Jerusalem artichoke	64 - 105 (2.25 – 3.75 lbs. a.e.)	3 – 20	1.5%	Apply when most plants are in the early bud stage.

WEED SPECIES	RATE (FL OZ/A)	WATER VOL. (GPA)	HAND-HELD % SOL.	COMMENTS
Johnsongrass	12.8 – 64 (0.45 – 2.25 lbs. a.e.)	3 – 40	1%	In annual cropping systems, apply 22 to 44 fluid ounces (0.75 to 1.5 lbs. a.e.) of this product in 3 to 10 gallons of water per acre. Use 44 fluid ounces (1.5 lbs. a.e.) of this product when applying 10 to 40 gallons of water per acre. On non- crop sites or in areas where annual tillage is not practiced (no-till), apply 44 to 64 fluid ounces (1.5 to 2.25 lbs. a.e.) of this product in 10 to 40 gallons of water per acre.  Apply when most johnsongrass has reached the boot to head stage of development or in the fall prior to frost. Allow a minimum of 7 days after application before tillage. Do not tank-mix with residual herbicides when applying 22 fluid ounces (0.75 lbs. a.e.) of this product per acre.  For burndown of johnsongrass, apply 11 fluid ounces (0.375 lbs. a.e.) of this product in 3 to 10 gallons of water per acre before plants reach a height of 12 inches and allow a minimum of 3 days after application before tillage. For partial control or suppression, apply a 0.7-percent solution of this product as a spot treatment when johnsongrass is 12 to 18 inches tall. Ensure that spray coverage is uniform and complete.
Kikuyugrass	48 – 64 (1.7 – 2.25 lbs. a.e.)	3 – 40	1/5%	Apply when most kikuyugrass is at least 8 inches tall (3- or 4-leaf stage of growth). Allow a minimum of 3 days after application before tillage.
Knapweed	96 (3.375 lbs. a.e.)	3 – 40	1.5%	Apply when most target plants have reached the late-bud to flower stage of growth.  Apply in late-summer or fall.
Lantana	-	-	1 – 1.25%	Apply at or beyond the bloom stage of growth.
Lespedeza	64 - 105 (2.25 – 3.75 lbs. a.e.)	3 – 20	1.5%	Apply when most plants are in the early bud stage.
Milkweed, common	64 (2.25 lbs. a.e.)	3 – 40	1.5%	Apply when most plants have reached the late-bud to flower stage of growth.
Muhly, wirestem	22 – 48 (0.75 – 1.7 lbs. a.e.)	3 – 40	1.5%	Apply 22 fluid ounces (0.75 lbs. a.e.) of this product in 3 to 10 gallons of water per acre, or 44 fluid ounces (1.5 lbs. a.e.) when applying in 10 to 40 gallons of water per acre or whenever applying in pasture, sod, or non-crop areas, when wirestem muhly is at least 8 inches tall. Do not till the soil between harvest and fall application, or in the fall or spring prior to spring application. Allow a minimum of 3 days after application before tillage.
Mullein, common	64 - 105 (2.25 – 3.75 lbs. a.e.)	3 – 20	1.5%	Apply when most plants are in the early bud stage.
Napiergrass	64 - 105 (2.25 – 3.75 lbs. a.e.)	3 – 20	1.5%	Apply when most plants are in the early head stage.
Nightshade, silverleaf	48 (1.7 lbs. a.e.)	3 – 10	1.5%	Apply when at least 60 percent of the target plants have berries. Fall application must be made before a killing frost.
Nutsedge; purple, yellow	12.8 – 64 (0.45 – 2.25 lbs. a.e.)	3 – 40	1 – 1.5%	For control of nutsedge plants and immature nutlets, apply 64 fluid ounces (2.25 lbs. a.e.) of this product per acre or a 1- to 1.5-percent solution when plants are in flower or when new nutlets can be found at rhizome tips. Nutlets that have not germinated will not be controlled and will need repeated applications of this product after germination for long-term control.  Sequential applications of 22 to 44 fluid ounces (0.75 to 1.5 lbs. a.e.) of this product in 3 to 10 gallons of water per acre when a majority of the nutsedge plants are in the 3- to 5-leaf stage (less than 6 inches tall) will also provide control. 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 nutsedge, apply 11 to 44 fluid ounces (0.375 to 1.5 lbs. a.e.) of this product in 3 to 40 gallons of water per acre when plants have 3 to 5 leaves and most are less than 6 inches tall. Repeat this application, as needed, to control newly emerging plants or re-growth of existing plants.

WEED SPECIES	RATE (FL OZ/A)	WATER VOL. (GPA)	HAND-HELD % SOL.	COMMENTS
Orchardgrass	22 – 48 (0.75 – 1.7 lbs. a.e.)	3 - 40	1.5%	Apply 44 fluid ounces (1.5 lbs. a.e.) of this product in 10 to 40 gallons of water per acre when most plants have reached the boot to early-seed head stage of development. For partial control in pasture or hay crop renovation, apply 22 to 32 fluid ounces (0.75 to 1.125 lbs. a.e.) of this product in 3 to 10 gallons of water per acre when orchardgrass is actively growing and has reached 4 to 12 inches in height. When going from orchardgrass sod to no-till corn, apply 22 to 32 fluid ounces (0.75 to 1.125 lbs. a.e.) of this product in 3 to 10 gallons of water per acre to orchardgrass that is a minimum of 12 inches tall for spring application and 6 inches tall for fall application. Allow a minimum of 3 days after application before planting. A sequential application of atrazine will be necessary to achieve optimum results.
Pampasgrass	-	-	1 – 1.5%	Apply this product when pampasgrass is at or beyond the boot stage of growth. Thorough coverage will provide control.
Paragrass	64 - 105 (2.25 – 3.75 lbs. a.e.)	3 – 20	1.5%	Apply when most plants are in the early head stage.
Phragmites	64 - 105 (2.25 – 3.75 lbs. a.e.)	10 – 40	1 – 1.5%	For partial control, apply this product in late-summer or fall when plants are actively growing and in full bloom. Application before or after this stage could result in reduced control. Due to the dense nature of this vegetation (which can prevent good spray coverage) and uneven stages of growth, more than one application might be necessary to achieve control. Visual symptoms of control will be slow to develop.
Poison hemlock	-	-	1 – 1.5%	Apply this product using a handheld sprayer with a spray-to-wet technique. Optimum results are obtained when thoroughly applied to target plants that are at the bud to full-bloom stage of growth.
Pokeweed, common	32 (1.125 lbs. a.e.)	3 – 40	1.5%	Apply to actively growing target plants up to 24 inches tall.
Quackgrass	22 – 64 (075 – 2.25 lbs. a.e.)	3 – 40	1.5%	In annual cropping systems or in pastures and sod fields to be cultivated with deep tillage, apply 22 fluid ounces (0.75 lbs. a.e.) of this product in 3 to 10 gallons of water per acre, or 44 fluid ounces (1.5 lbs. a.e.) in 10 to 40 gallons of water per acre, when quackgrass is 6 to 8 inches in height. Do not tank-mix with residual herbicides when using the 22-fluid-ounce rate. Do not till between harvest and fall application, or in the fall or spring prior to spring application. Allow a minimum of 3 days after application before tillage. In pastures or sods, use a moldboard plow. In pastures, sod fields or non-crop areas where deep tillage will not follow application of this product, apply 44 to 64 fluid ounces (1.5 to 2.25 lbs. a.e.) in 10 to 40 gallons of water per acre when quackgrass is greater than 8 inches tall.
Redvine	16 – 48 (0.56 – 1.7 lbs. a.e.)	5 – 10	1.5%	For suppression, make two applications of 16 fluid ounces (0.56 lbs. a.e.) of this product 7 to 14 days apart, or a single application of 44 fluid ounces (1.5 lbs. a.e.), in 5 to 10 gallons of water per acre in late-September or early-October to plants that are at least 18 inches tall and have been growing 45 to 60 days since the last tillage operation. Apply a minimum of 1 week before a killing frost.
Reed, giant	-	-	1.5%	Best results are obtained when applications are made in late summer to fall.
Ryegrass, perennial	22 – 64 (0.75 – 2.25 lbs. a.e.)	3 – 40	1%	In annual cropping systems, apply 22 to 44 fluid ounces (0.75 to 1.5 lbs. a.e.) of this product in 3 to 10 gallons of water per acre, or 44 fluid ounces (1.5 lbs. a.e.) when applying in 10 to 40 gallons of water per acre. On non-crop sites or in fields where annual tillage is not practiced (no-till), apply 44 to 64 fluid ounces (1.5 to 2.25 lbs. a.e.) of this product in 10 to 40 gallons of water per acre.  Apply when most ryegrass has reached the boot to head stage of growth or in the fall prior to frost. Do not tank-mix with residual herbicides when applying 22 fluid ounces (0.75 lbs. a.e.) of this product per acre.
Smartweed, swamp	64 – 105 (2.25 – 3.75 lbs. a.e.)	3 – 40	1.5%	Also, for control, apply 11 fluid ounces (0.375 lbs. a.e.) of this product plus the labeled rate of 2,4-D in 3 to 10 gallons of water per acre in late-summer or fall.

WEED SPECIES	RATE (FL OZ/A)	WATER VOL. (GPA)	HAND-HELD % SOL.	COMMENTS
Sowthistle, perennial	48 – 64 (1.7 – 2.25 lbs. a.e.)	3 – 40	1.5%	Apply when most plants are at or beyond the bud stage of growth. After harvest, mowing or tillage in late-summer or fall, allow a minimum of 4 weeks for initiation of active growth and rosette development prior to application of this product. Fall application must be made before a killing frost. Allow a minimum of 3 days after application before tillage.
Spurge, leafy	-	3 – 10	1.5%	For suppression, apply 11 fluid ounces (0.375 lbs. a.e.) of this product plus the labeled rate of 2,4-D in 3 to 10 gallons of water per acre in late-summer or fall. If mowing has occurred, delay application until most target plants are 12 inches tall.
Starthistle, yellow	48 (1.7 lbs. a.e.)	10 – 40	1.5%	Make application during the rosette, bolting or early-flower stage.
Sweet potato, wild	-	-	1.5%	For partial control, apply to plants that are at or beyond the bloom stage of growth.  More than one application might be needed
Thistle, artichoke	-	-	1.5%	For partial control, apply when plants are at or beyond the bloom stage of growth. More than one application might be needed.
Thistle, Canada	48 – 64 (1.7 – 2.25 lbs. a.e.)	3 – 40	1.5%	Apply when most target plants are at or beyond the bud stage of development. After harvest, mowing or tillage in late-summer or fall, allow a minimum of 4 weeks for initiation of active growth and rosette development prior to application of this product. Fall application must be made before a killing frost. For suppression in the spring, apply 22 fluid ounces (0.75 lbs. a.e.) of this product alone, or 11 fluid ounces (0.375 lbs. a.e.) of this product plus the labeled rate of 2,4-D, in 3 to 10 gallons of water per acre when rosette is a minimum of 6 inches in diameter. Application may be made as long as leaves are still green and plants are actively growing.  Allow a minimum of 3 days after application before tillage.
Timothy	48 – 64 (1.7 – 2.25 lbs. a.e.)	3 – 40	1.5%	For best results, apply when most plants have reached the boot-to-head stage of growth.
Torpedograss	80 – 105 (2.8 – 3.75 lbs. a.e.)	3 – 40	1.5%	For partial control, apply when most target plants are at or beyond the seed head stage of development. More than one application will be needed to achieve control. Fall application must be made before frost.
Trumpetcreeper	48 (1.7 lbs. a.e.)	5 – 10	1.5%	For partial control, apply in late-September or October when trumpetcreeper is a minimum of 18 inches tall and has been growing 45 to 60 days since the last tillage operation. Make application a minimum of 1 week before a killing frost.
Vaseygrass	64 - 105 (2.25 – 3.75 lbs. a.e.)	3 – 20	1.5%	Apply when most plants are in the early head stage.
Velvetgrass	64 - 105 (2.25 – 3.75 lbs. a.e.)	3 – 20	1.5%	Apply when most plants are in the early head stage.
Wheatgrass, western	48 – 64 (1.7 – 2.25 lbs. a.e.)	3 – 40	1.5%	For best results, apply when most plants have reached the boot-to-head stage of growth.

# 17.0 WOODY BRUSH AND TREES RATE TABLE (ALPHABETICAL BY SPECIES)

Apply this product during full leaf expansion, unless otherwise directed. Use the higher rate of application or spray solution concentration within a given range for larger plants or in areas of dense vegetative growth. On vines, use the higher rate of application or spray solution concentration for plants that have reached the woody stage. Make application in late-summer or fall after fruit formation.

In arid areas, make application in spring to early-summer when brush species are at high moisture content and flowering.

Unless otherwise directed, make broadcast applications in 3 to 40 gallons of water per acre. Ensure thorough coverage when using handheld sprayers. Herbicidal symptoms might not appear prior to frost or senescence following application in the fall.

Allow a minimum of 7 days after application before tillage, mowing or removal of vegetation in the application area. Repeat applications might be necessary to control plants regenerating from underground parts or seed. Some autumn color on undesirable deciduous species is acceptable when applying this product, provided no major leaf drop has occurred. Reduced performance could result if fall application is made after a frost.

WEED SPECIES	RATE (FL OZ/A)	HANDHELD % SOL.	COMMENTS
Alder	64 -96 (2.25 – 3.375 lbs. a.e.)	1%	For control
Ash	48 – 105 (1.7 – 3.75 lbs. a.e.)	1-1.5%	Partial control
Bearmat (Bearclover)	48 – 105 (1.7 – 3.75 lbs. a.e.)	1-1.5%	Partial control
Beech	48 – 105 (1.7 – 3.75 lbs. a.e.)	1-1.5%	Partial control
Birch	-	1%	For control
Blackberry	64 – 96 (2.25 – 3.375 lbs. a.e.)	1%	Apply after target plants have reached full leaf maturity. Make application in late-summer or fall. Apply a 0.7-percent solution of this product after berries have set or dropped in late-fall. After leaf drop and until a killing frost or as long as stems are green, apply 64 to 80 fluid ounces (2.25 to 3.0 lbs. a.e.) of this product in 10 to 40 gallons of water per acre.
Blackgum	48 – 105 (1.7 – 3.75 lbs. a.e.)	1-1.5%	For control
Bracken	48 – 105 (1.7 – 3.75 lbs. a.e.)	1-1.5%	For control
Broom, French, Scotch	-	1-1.5%	For control
Buckwheat, California	-	1-1.5%	Partial control. Thorough coverage of foliage is necessary for best results.
Cascara	48 – 105 (1.7 – 3.75 lbs. a.e.)	1-1.5%	Partial control
Catsclaw		1%	Partial control
Ceanothus	48 – 105 (1.7 – 3.75 lbs. a.e.)	1-1.5%	Partial control
Chamise		1%	Partial control. Thorough coverage of foliage is necessary for best results.
Cherry; bitter, black, pin	48 – 64 (1.7 – 2.25 lbs. a.e.)	1%	For control
Coyote brush	-	1-1.5%	Apply when at least 50 percent of the new leaves are fully developed.
Dogwood	48 – 105 (1.7 – 3.75 lbs. a.e.)	1-1.5%	Partial control
Elderberry	48 – 64 (1.7 – 2.25 lbs. a.e.)	1%	For control
Elm	48 – 105 (1.7 – 3.75 lbs. a.e.)	1-1.5%	Partial control
Eucalyptus	-	1.5%	For control of eucalyptus re-sprouts, apply when re-sprouts are 6 to 12 feet tall. Ensure complete coverage. Application to drought-stressed eucalyptus plants will result in less than optimum results.
Florida holly (Brazilian Peppertree)	48 – 105 (1.7 – 3.75 lbs. a.e.)	1 – 1.5%	Partial control
Gorse	48 – 105 (1.7 – 3.75 lbs. a.e.)	1 – 1.5%	Partial control
Hawthorn	48 – 64 (1.7 – 2.25 lbs. a.e.)	1%	For control
Hazel	48 – 64 (1.7 – 2.25 lbs. a.e.)	1%	For control
Hickory	48 – 105	1 – 1.5%	Partial control
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WEED SPECIES	RATE (FL OZ/A)	HANDHELD % SOL.	COMMENTS
Honeysuckle	64 – 96 (2.25 – 3.375 lbs. a.e.)	1%	For control
Hornbeam, American	48 – 105 (1.7 – 3.75 lbs. a.e.)	1 – 1.5%	Partial control
Kudzu	80 – 105 ( <b>2.8 – 3.75 lbs. a.e.</b> )	1.5%	More than one application might be needed to achieve control.
Locust, black	48 – 96 (1.7 – 3.375 lbs. a.e.)	1 – 1.5%	Partial control
Madrone re-sprouts	-	1.5%	Apply to re-sprouts that are 3 to 6 feet tall. Apply in spring or early-summer.
Manzanita	48 – 105 (1.7 – 3.75 lbs. a.e.)	1 – 1.5%	Partial control
Maple, red	48 – 96 (1.7 – 3.375 lbs. a.e.)	1%	Apply a 1-percent solution when at least 50 percent of the new leaves are fully developed. For partial control, apply 44 to 86 fluid ounces of this product per acre.
Maples, sugar	-	1%	Apply when at least 50 percent 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	48 – 96 (1.7 – 3.375 lbs. a.e.)	1 – 1.5%	Partial control
Oak, post	64 – 96 (2.25 – 3.375 lbs. a.e.)	1%	For control
Oak, northern	-	1%	Apply when at least 50 percent of the new pin leaves are fully developed
Oak, southern red	48 – 64 (1.7 – 2.25 lbs. a.e.)	1%	For control. Thorough coverage of foliage is necessary for best results.
Persimmon	48 – 105 (1.7 – 3.75 lbs. a.e.)	1 – 1.5%	Partial control
Pine	48 – 105 (1.7 – 3.75 lbs. a.e.)	1 – 1.5%	For control.
Poison ivy/Poison oak	80 – 105 (2.8 – 3.75 lbs. a.e.)	1.5%	More than one application might be needed to achieve control. Application in the fall must be made before leaves lose green color.
Poplar, yellow	48 – 105 (1.7 – 3.75 lbs. a.e.)	1 – 1.5%	Partial control
Redbud, eastern	48 – 105 (1.7 – 3.75 lbs. a.e.)	1 – 1.5%	For control.
Rose, multiflora	48 (1.7 lbs. a.e.)	1%	Make application prior to leaf deterioration by leaf-eating insects.
Russian olive	48 – 105 (1.7 – 3.75 lbs. a.e.)	1 – 1.5%	Partial control
Sage, black	_	1%	For control. Thorough coverage of foliage is necessary for best results.
Sage, white	48 – 105 (1.7 – 3.75 lbs. a.e.)	1 – 1.5%	Partial control
Sagebrush, California	_	1%	For control. Thorough coverage of foliage is necessary for best results.
Salmonberry	48 – 64 (1.7 – 2.25 lbs. a.e.)	1%	For control
Saltcedar	48 – 105 (1.7 – 3.75 lbs. a.e.)	1 – 1.5%	For control
Sassafras	48 – 105 (1.7 – 3.75 lbs. a.e.)	1 – 1.5%	Partial control
Sourwood	48 – 105 (1.7 – 3.75 lbs. a.e.)	1 – 1.5%	Partial control
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WEED SPECIES	RATE (FL OZ/A)	HANDHELD % SOL.	COMMENTS
Sumac; poison, smooth, winged	48 – 96 (1.7 – 3.375 lbs. a.e.)	1 – 1.5%	Partial control
Sweetgum	48 – 64 (1.7 – 2.25 lbs. a.e.)	1%	For control
Swordfern	48 – 105 (1.7 – 3.75 lbs. a.e.)	1 – 1.5%	Partial control
Tallowtree, Chinese		1%	For control. Thorough coverage of foliage is necessary for best results.
Tan oak re-sprouts	-	1.5%	Apply to re-sprouts that are less than 6 feet tall. Make application in the fall.
Thimbleberry	48 – 64 (1.7 – 2.25 lbs. a.e.)	1%	For control
Tobacco, tree	-	1 – 1.5%	Partial control
Trumpetcreeper	48 – 64 (1.7 – 2.25 lbs. a.e.)	1%	For control
Vine maple	48 – 105 (1.7 – 3.75 lbs. a.e.)	1 – 1.5%	Partial control
Virginia creeper	48 – 105 (1.7 – 3.75 lbs. a.e.)	1 – 1.5%	For control
Waxmyrtle, southern	48 – 105 (1.7 – 3.75 lbs. a.e.)	1 – 1.5%	Partial control
Willow	64 – 96 (2.25 – 3.375 lbs. a.e.)	1%	For control

# 20.0 LIMIT OF WARRANTY AND LIABILITY

WILLOWOOD GLYPHOSATE, LLC warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes set forth in the Complete Directions for Use label booklet ("Directions") when used in accordance with those Directions under the conditions described therein. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, NO OTHER EXPRESS WARRANTY OR IMPLIED WARRANTY OF FITNESS FOR PARTICULAR PURPOSE OR MERCHANTABILITY IS MADE. This warranty is also subject to the conditions and limitations stated herein.

Buyer and all users shall promptly notify WILLOWOOD GLYPHOSATE, LLC of any claims whether based in contract, negligence, strict liability, other tort or otherwise.

To the extent permitted by applicable law, buyer and all users are responsible for all loss or damage from use or handling which results from conditions beyond the control of WILLOWOOD GLYPHOSATE, LLC, including, but not limited to, incompatibility with products other than those set forth in the Directions, application to or contact with desirable vegetation, failure of this product to control weed biotypes which develop resistance to glyphosate, unusual weather, weather conditions which are outside the range considered normal at the application site and for the time period when the product is applied, as well as weather conditions which are outside the application ranges set forth in the Directions, application in any manner not explicitly set forth in the Directions, moisture conditions outside the moisture range specified in the Directions, or the presence of products other than those set forth in the Directions in or on the soil, crop or treated vegetation.

WILLOWOOD GLYPHOSATE, LLC does not warrant any product reformulated or repackaged from this product except in accordance with WILLOWOOD GLYPHOSATE, LLC's stewardship requirements and with express written permission from WILLOWOOD GLYPHOSATE, LLC.

TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE LIMIT OF THE LIABILITY OF WILLOWOOD GLYPHOSATE, LLC, OR ANY OTHER SELLER FOR ANY AND ALL LOSSES, INJURIES OR DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT (INCLUDING CLAIMS BASED IN CONTRACT, NEGLIGENCE, STRICT LIABILITY, OTHER TORT OR OTHERWISE) SHALL BE THE PURCHASE PRICE PAID BY THE USER OR BUYER FOR THE QUANTITY OF THIS PRODUCT INVOLVED, OR, AT THE ELECTION OF WILLOWOOD GLYPHOSATE, LLC OR ANY OTHER SELLER, THE REPLACEMENT OF SUCH QUANTITY, TO THE FULLEST EXTENT PERMITTED BY LAW, IN NO EVENT SHALL WILLOWOOD GLYPHOSATE, LLC OR ANY OTHER SELLER BE LIABLE FOR ANY INCIDENTAL. CONSEQUENTIAL OR SPECIAL DAMAGES.

Upon opening and using this product, buyer and all users are deemed to have accepted the terms of this LIMIT OF WARRANTY AND LIABILITY which may not be varied by any verbal or written agreement. If terms are not acceptable, return at once unopened.

All other trademarks are the property of their respective owners.