

This sample label is current as of January 28, 2004. The product descriptions and recommendations provided in this sample label are for background information only. Always refer to the label on the product before using Monsanto or any other agrichemical product.

63009C2-1/CG

GROUP 9 HERBICIDE



Non-selective, broad-spectrum weed control for many agricultural systems.

## Complete Directions for Use

EPA Reg. No. 524-539

For control of annual and perennial weeds in Colorado, Idaho, Kansas\*, Minnesota\*, Montana, Nebraska\*, Nevada, New Mexico\*, North Dakota, Oklahoma\*, Oregon, South Dakota, Texas\*, Utah, Washington and Wyoming.

AVOID CONTACT OF HERBICIDE WITH FOLIAGE, GREEN STEMS, EXPOSED NON-WOODY ROOTS OR FRUIT OF CROPS, DESIRABLE PLANTS AND TREES, BECAUSE SEVERE INJURY OR DESTRUCTION MAY RESULT.

2004-1

### \*COUNTY DISTRIBUTION

In KANSAS, MINNESOTA, NEBRASKA, NEW MEXICO, OKLAHOMA and TEXAS, this product is distributed in those counties listed below:

#### KANSAS:

Barber, Barton, Butler, Chautauqua, Cheyenne, Clark, Cloud, Comanche, Cowley, Decatur, Edwards, Elk, Ellis, Ellsworth, Finney, Ford, Gove, Graham, Grant, Gray, Greeley, Greenwood, Hamilton, Harper, Harvey, Haskell, Hodgeman, Jewell, Kearny, Kingman, Kiowa, Lane, Lincoln, Logan, McPherson, Meade, Mitchell, Morton, Ness, Norton, Osborne, Ottawa, Pawnee, Phillips, Pratt, Rawlins, Reno, Republic, Rice, Rooks, Rush, Russell, Saline, Scott, Sedgwick, Seward, Sheridan, Sherman, Smith, Stafford, Stanton, Stevens, Sumner, Thomas, Trego, Wallace, Wichita

#### MINNESOTA:

Becker, Clay, Douglas, Kittson, Lake Of The Woods, Mahnomon, Marshall, Norman, Otter Tail, Pennington, Polk, Red Lake, Roseau, Wilkin

#### NEBRASKA:

Arthur, Banner, Box Butte, Chase, Cheyenne, Custer, Dawes, Dawson, Deuel, Dundy, Frontier, Furnas, Garden, Gosper, Grant, Hayes, Hitchcock, Hooker, Keith, Kimball, Lincoln, Logan, McPherson, Morrill, Perkins, Red Willow, Scotts Bluff, Sheridan, Sioux, Thomas

#### NEW MEXICO:

Colfax, Rio Arriba, San Juan, Taos, Union

#### OKLAHOMA:

Alfalfa, Beaver, Blaine, Canadian, Cimarron, Custer, Dewey, Ellis, Garfield, Grant, Harper, Kay, Kingfisher, Logan, Major, Noble, Pawnee, Payne, Roger Mills, Texas, Woods, Woodward

#### TEXAS:

Dallam, Hansford, Hartley, Hemphill, Hutchinson, Lipscomb, Moore, Ochiltree, Roberts, Sherman

Read the entire label before using this product.

Use only according to label instructions.

Read the "LIMIT OF WARRANTY AND LIABILITY" statement at the end of the label before buying or using. If terms are not acceptable, return at once unopened.

THIS IS AN END-USE PRODUCT. MONSANTO DOES NOT INTEND AND HAS NOT REGISTERED IT FOR REFORMULATION. SEE INDIVIDUAL CONTAINER LABEL FOR REPACKAGING LIMITATIONS.

## 1.0 INGREDIENTS

ACTIVE INGREDIENT:

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

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

This product is protected by U.S. Patents Nos. 6,365,551 and RE 37,866. Other patents pending. No license granted under any non-U.S. patent(s).

## 2.0 IMPORTANT PHONE NUMBERS

1. FOR PRODUCT INFORMATION OR ASSISTANCE IN USING THIS PRODUCT, CALL TOLL-FREE,

1-800-332-3111.

2. IN CASE OF AN EMERGENCY INVOLVING THIS HERBICIDE PRODUCT, OR FOR MEDICAL ASSISTANCE, CALL COLLECT, DAY OR NIGHT,

(314)-694-4000.

## 3.0 PRECAUTIONARY STATEMENTS

### 3.1 Hazards to Humans and Domestic Animals

Keep out of reach of children.

### CAUTION!

CAUSES MODERATE EYE IRRITATION.

Avoid contact with eyes, skin, or clothing.

<b>FIRST AID:</b>	Call a poison control center or doctor for treatment advice.
<b>IF IN EYES</b>	<ul style="list-style-type: none"><li>• Hold eye open and rinse slowly and gently with water for 15 - 20 minutes.</li><li>• Remove contact lenses if present after the first 5 minutes then continue rinsing eye.</li></ul>
<b>IF ON SKIN</b>	<ul style="list-style-type: none"><li>• Take off contaminated clothing.</li><li>• Rinse skin immediately with plenty of water for 15 - 20 minutes.</li></ul>
<ul style="list-style-type: none"><li>• Have the product container or label with you when calling a poison control center or doctor, or going for treatment.</li><li>• You may also contact (314) 694-4000, collect day or night, for emergency medical treatment information.</li><li>• This product is identified as RT Master® II herbicide, EPA Registration No. 524-539.</li></ul>	

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

#### Personal Protective Equipment (PPE)

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

**Applicators and other handlers must wear:** long-sleeved shirt and long pants, socks, shoes, and chemical-resistant gloves made of any waterproof material such as polyethylene or polyvinyl chloride.

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

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

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

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

### User Safety Recommendations

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on 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 washwaters.

## 3.3 Physical or Chemical Hazards

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

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

## DIRECTIONS FOR USE

It is a violation of Federal law to use this product in any manner inconsistent with its labeling. This product can only be used in accordance with the Directions for Use on this label or in separately published Monsanto Supplemental Labeling. Supplemental Labeling may be found on the [cdms.net](http://cdms.net) or [greenbook.net](http://greenbook.net) websites or obtained by contacting your Authorized Monsanto Retailer or Monsanto Company Representative.

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

### Agricultural Use Requirements

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

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

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

### Non-Agricultural Use Requirements

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

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

## 4.0 STORAGE AND DISPOSAL

**PESTICIDE STORAGE:** Do not contaminate water, foodstuffs, feed or seed by storage or disposal. Keep container closed to prevent spills and contamination.

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

Emptied container retains vapor and product residue. Observe all labeled safeguards until container is cleaned, reconditioned, or destroyed.

See container label for alternate PESTICIDE DISPOSAL instructions.

## 5.0 GENERAL INFORMATION

**Product Description:** This product is a postemergent, systemic herbicide with no soil residual activity. It is generally non-selective and gives broad-spectrum control of many annual and perennial weeds. It is formulated as a water-soluble liquid. It may be applied through most standard industrial or field-type sprayers after dilution and thorough mixing with water or other carriers according to label instructions.

Do not add buffering agents or pH adjusting agents to the spray solution when RT Master II herbicide is the only pesticide used unless otherwise directed. See the "MIXING" section of this label for instructions regarding other additives.

Although not generally required, surfactants or additives containing surfactants may be added to this product. Refer to the "Mixing" section of this label for additional information.

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

**Stage of Weeds:** Annual weeds are easiest to control when they are small. Best control of most perennial weeds is obtained when treatment is made at late growth stages approaching maturity. Refer to the "ANNUAL WEEDS" and "PERENNIAL WEEDS RATE SECTIONS" for recommendations for specific weeds.

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

Reduced weed control may result from treating weeds with disease or insect damage, weeds heavily covered with dust, or weeds under poor growing conditions.

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

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

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

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

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

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

**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.

When this label recommends a tank mixture with a generic active ingredient such as diuron, atrazine, 2,4-D, or dicamba, the user is responsible for ensuring that the mixture product's label allows the specific application.

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

Tank mixtures with certain herbicides listed in this label may result in reduced weed control due to antagonism. Read and carefully observe the cautionary statements and all other information appearing on the product labels, supplemental labeling or fact sheets published separately for all herbicides used. Use according to the most restrictive directions for each product in the mixture.

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

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

**Information on Weed Resistance:**

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

Weed resistance management recommendations for Group 9 herbicides are:

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

## 6.0 MIXING

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

**NOTE:** REDUCED RESULTS MAY OCCUR IF WATER CONTAINING SOIL IS USED, SUCH AS VISIBLY MUDDY WATER OR WATER FROM PONDS AND DITCHES THAT IS NOT CLEAR.

### 6.1 Mixing with Water

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

### 6.2 Tank Mixing Procedure

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

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

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

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

Always predetermine the compatibility of labeled tank mixtures of this product with water carrier by mixing small proportional quantities in advance. Ensure that the specific tank mixture product is registered for application at the desired site.

Refer to the "Tank Mixing" section of "GENERAL INFORMATION" for additional precautions.

### 6.3 Mixing for Hand-Held Sprayers

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

#### Spray Solution

Desired Volume	Amount of RT Master II herbicide					
	0.4%	0.7%	1%	1.5%	4%	7%
1 gal	0.5 oz	1 oz	1.3 oz	2 oz	5 oz	9 oz
25 gal	0.8 pt	0.7 qt	1 qt	1.5 qt	4 qt	7 qt
100 gal	1.6 qt	2.8 qt	1 gal	1.5 gal	4 gal	7 gal

2 tablespoons = 1 fluid ounce

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

### 6.4 Surfactants

Although not generally required, surfactant may be added to this product. However, surfactant addition is recommended at water carrier volumes above 30 gallons per acre or 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. When adding additional surfactant, a rate of 0.25 to 0.50 percent surfactant concentration (1 to 2 quarts per 100 gallons of spray solution) when using surfactants which contain at least 70 percent active ingredient or a 1 percent surfactant concentration (4 quarts per 100 gallons of spray solution) for those surfactants containing less than 70 percent active ingredient is recommended. Read and carefully observe surfactant cautionary statements and other information appearing on the surfactant label.

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

## 6.5 Ammonium Sulfate

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

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

### 6.6 Colorants or Dyes

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

### 6.7 Drift Reduction Additives

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

## 7.0 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**—Fixed Wing and Helicopter

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

**Hand-Held or High-Volume Spray Equipment**—Knapsack and backpack sprayers, pump-up pressure sprayers, handguns, handwands, mistblowers, lances and other hand-held and motorized spray equipment used to direct the spray onto weed foliage.

**Selective Equipment**—Recirculating sprayers, shielded and hooded sprayers, wiper applicators and sponge bars.

**Injection Systems**—Aerial or ground injection sprayers.

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

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

### 7.1 Aerial Equipment

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

Use the recommended 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 22 fluid ounces per acre. Refer to the individual use area sections of this label for recommended volumes, application rates, and further instructions.

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

#### AERIAL SPRAY DRIFT MANAGEMENT

The following drift management requirements must be followed to avoid off-target drift movement from aerial applications to agricultural field crops.

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

#### Importance of Droplet Size

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

#### Controlling Droplet Size

- **Volume:** Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with the higher rated flows produce larger droplets.
- **Pressure:** Use the lower spray pressures recommended for the nozzle. Higher pressure reduces droplet size and does not improve canopy penetration. When higher flow rates are needed, use higher flow rate nozzles instead of increasing pressure.
- **Number of nozzles:** Use the minimum number of nozzles that provide uniform coverage.

- **Nozzle orientation:** Orienting nozzles so that the spray is released backwards, parallel to the airstream, will produce larger droplets than other orientations. Significant deflection from the horizontal will reduce droplet size and increase drift potential.
- **Nozzle type:** Use a nozzle type that is designed for the intended application. With most nozzle types, narrower spray angles produce larger droplets. Consider using low-drift nozzles. Solid stream nozzles oriented straight back produce larger droplets than other nozzle types.
- **Boom length:** For some use patterns, reducing the effective boom length to less than 3/4 of the wingspan or rotor length may further reduce drift without reducing swath width.
- **Application height:** Applications should not be made at a height greater than 10 feet above the top of the largest plants unless a greater height is required for aircraft safety. Making applications at the lowest height that is safe reduces the exposure of the droplets to evaporation and wind.

#### Swath Adjustment

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

#### Wind

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

#### Temperature and Humidity

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

#### Temperature Inversions

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

#### Sensitive Areas

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

Avoid direct application to any body of water.

#### Aircraft Maintenance

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

## 7.2 Ground Broadcast Equipment

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

## 7.3 Hand-Held or High-Volume Equipment

Apply to foliage of vegetation to be controlled. For applications made on a spray-to-wet basis, spray coverage should be uniform and complete. Do not spray to the point of runoff. Use coarse sprays only. For recommended rates and timing, refer to the "Annual Weeds—Hand-Held or High-Volume Equipment" section of this product label.

## 7.4 Selective Equipment

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

In cropping systems, hooded sprayers, shielded sprayers, and wipers may be used in row-middles (in between rows of crop plants) where any dripping or leaking will not contact crop foliage. Such equipment must be capable of preventing all crop contact with

herbicide solutions and operated without leakage of spray mists or dripping onto crop. Wipers over-the-top of crops may be used only when specifically recommended in this product's labeling.

#### AVOID CONTACT OF HERBICIDE WITH DESIRABLE VEGETATION.

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

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

#### Recirculating Spray System

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

#### Shielded and Hooded Applicators

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

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

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

These procedures will reduce the potential for crop injury:

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

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

#### Wiper Applicators

When applied under the conditions described in the following paragraphs, this product **CONTROLS** many weeds, including volunteer corn, Texas panicum, common rye, shatter-cane, sicklepod, spanishneedles and bristly starbur; and **SUPPRESSES** many weeds including Florida beggarweed, Bermudagrass, hemp dogbane, dogfennel, guineagrass, johnsongrass, milkweed, silverleaf nightshade, redroot pigweed, giant ragweed, smutgrass, sunflower, Canada thistle, musk thistle, vaseygrass, and velvetleaf.

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

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

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

Do not use wiper equipment when weeds are wet.

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

Do not add surfactant to the herbicide solution.

**For Rope or Sponge Wick Applicators**—Solutions ranging from 33 to 75 percent of this product in water may be used. Apply this solution to weeds listed above in this section.

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



## 7.5 Injection Systems

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

## 7.6 CDA Equipment

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

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 miles per hour (1 quart per acre). For the control of perennial weeds, apply a 20 to 30 percent solution of this product at a flow rate of 2 fluid ounces per minute and a walking speed of 0.75 miles per hour (2 to 3 quarts per acre).

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

## 8.0 ANNUAL AND PERENNIAL CROPS (Alphabetical)

**NOTE:** THIS SECTION GIVES GENERAL DIRECTIONS THAT APPLY TO ALL LISTED CROPS WITHIN SECTION 8 GROUPED ALPHABETICALLY BELOW. SEE THE INDIVIDUAL CROP CATEGORIES FOR SPECIFIC INSTRUCTIONS, PREHARVEST INTERVALS, AND ADDITIONAL PRECAUTIONS AND RESTRICTIONS.

**TYPES OF APPLICATIONS:** Chemical Fallow, Preplant, Preemergence, At-Planting, Hooded Sprayers in Row-Middles, Shielded Sprayers in Row-Middles, Wiper Applications in Row-Middles, and Post-Harvest Treatments.

**GENERAL USE INSTRUCTIONS:**

Apply this product during fallow intervals preceding planting, prior to planting or transplanting, at-planting, or preemergent to annual and perennial crops listed in this label, except where specifically limited. For any crop not listed in this label, applications must be made at least 30 days prior to planting. Unless otherwise specified, weed control applications may be made according to the rates listed in the "ANNUAL WEEDS" and "PERENNIAL WEEDS RATE SECTIONS" in this label. Repeat applications may be made up to a maximum of 5.3 quarts per acre per year.

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

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

**GENERAL PRECAUTIONS, RESTRICTIONS:**

Avoid contact of herbicide with foliage, green shoots or stems, bark, exposed roots (including those emerging from plastic mulch), or fruit of crops because severe injury or destruction may result. When making preemergence 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. Apply before seed germination in coarse sandy soils to further minimize the risk of injury. 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. See "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label for additional information.

In crops where spot treatments are allowed, do not treat more than 10 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.

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

## 8.1 Cereal and Grain Crops

**LABELED CROPS:** Barley, Millet (pearl, proso), Oats, Rye, Teosinte, Triticale, Wheat (all types).

**TYPES OF APPLICATIONS:** Those listed in Section 8.0 plus the following: Spot Treatment, Over-the-Top Wiper Applications (Feed Barley and Wheat Only), Preharvest (Feed Barley and Wheat Only).

**Preplant, Preemergence, At-Planting**

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

**Spot Treatment**

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

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

**Over-the-Top Wiper Applications (Feed Barley and Wheat Only)**

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

**PRECAUTIONS, RESTRICTIONS:** Allow at least 35 days between application and harvest. Do not use roller applicators.

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

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

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

**PRECAUTIONS, RESTRICTIONS:** Do not apply more than 22 fluid ounces of this product per acre. Allow 7 days between application and harvest or grazing. Preharvest application is not recommended for wheat or barley grown for seed, as a reduction in germination or vigor may occur.

**Post-Harvest**

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

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

## 8.2 Corn

**TYPES OF CORN:** Field Corn, Seed Corn, Silage Corn, Sweet Corn and Popcorn.

**TYPES OF APPLICATIONS:** Those listed in Section 8.0 plus the following: Spot Treatment, Preharvest.

**Preplant, Preemergence, At-Planting**

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

**TANK MIXTURES:** This product may be tank mixed with the following products provided that the specific product is registered for application prior to planting corn. Apply these tank mixtures in 10 to 20 gallons of water or 10 to 60 gallons of nitrogen solution per acre.

2,4-D	Frontier®/Outlook®
Aim®	FulTime®
Atrazine	Guardman®/Leadoff®
Axiom®	Harness®
Balance®	Harness Xtra
Banvel®/Clarity®	Harness Xtra 5.6L
Bicep MAGNUM®	Lariat®
Bicep II MAGNUM®	Lasso®/Alachlor
Bullet®	Linex®/Lorox®
Degree®	Marksman®
Degree Xtra®	Micro-Tech®
Distinct®	Prowl®
Dual MAGNUM®	Python®
Dual II MAGNUM®	Simazine
Epic®	TopNotch®

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

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

For Southern states, do not apply in nitrogen solutions to tough-to-control grasses such as barnyardgrass, fall panicum, broadleaf signalgrass, annual ryegrass and any perennial weeds. The area covered by this recommendation includes the following states: Oklahoma and Texas.

**Hooded Sprayers**

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

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

#### Spot Treatment

**USE INSTRUCTIONS:** For spot treatments, apply this product prior to silking of corn.  
**PRECAUTIONS, RESTRICTIONS:** Do not treat more than 10 percent of the total field area to be harvested. The crop receiving spray in the treated area will be killed. Take care to avoid drift or spray outside target area for the same reason.

#### Preharvest

**USE INSTRUCTIONS:** Make applications at 35 percent grain moisture or less. Ensure that maximum kernel fill is complete and the corn is physiologically mature (black layer formed). For ground applications, apply up to 64 fluid ounces of this product per acre. For aerial applications, apply up to 44 fluid ounces of this product per acre.  
**PRECAUTIONS, RESTRICTIONS:** Allow a minimum of 7 days between application and harvest. Preharvest application is not recommended for corn grown for seed, as a reduction in germination or vigor may occur.

#### Post-Harvest

**USE INSTRUCTIONS:** This product may be applied after harvest of corn. Higher rates may be required for control of large weeds that were growing in the crop at the time of harvest. Tank mixtures with 2,4-D or dicamba may be used.  
**PRECAUTIONS, RESTRICTIONS:** Allow a minimum of 7 days between treatment and harvest or feeding of treated vegetation.

## 8.3 Cotton

**TYPES OF APPLICATIONS:** Those listed in Section 8.0 plus the following: Selective Equipment, Spot Treatment, Preharvest.

#### Preplant, Preemergence, At-Planting

**USE INSTRUCTIONS:** This product may be applied before, during or after planting cotton. Applications must be made prior to emergence of the crop.  
**TANK MIXTURES:** This product may be tank mixed with the following products provided that the specific product is registered for application prior to planting cotton. Apply these tank mixtures in 10 to 20 gallons of water per acre.

Caparol®	Dual II Magnum
Clarity	Karmex®
Command®	Meturon®
Cotoran®	Prowl
Cotton-Pro®	Staple®
Direx®	Zorial®
Dual Magnum	2,4-D

**PRECAUTIONS, RESTRICTIONS:** Refer to individual product labels for rates, restrictions, precautionary statements and preplant intervals.

#### Hooded Sprayers, Selective Equipment

**USE INSTRUCTIONS:** This product may be applied through hooded sprayers, recirculating sprayers, shielded applicators or wiper applicators in cotton. Allow at least 7 days between application and harvest.  
**PRECAUTIONS, RESTRICTIONS:** See the "Selective Equipment" part of the "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label for information on proper use and calibration of this equipment.

#### Spot Treatment

**USE INSTRUCTIONS:** For spot treatments, apply this product prior to boll opening of cotton.  
**PRECAUTIONS, RESTRICTIONS:** Do not treat more than 10 percent of the total field area to be harvested. The crop receiving spray in treated area will be killed. Take care to avoid drift or spray outside target area for the same reason.

#### Preharvest

**USE INSTRUCTIONS:** This product provides weed control and cotton regrowth inhibition when applied prior to harvest of cotton. For weed control, apply at rates given in the "ANNUAL WEEDS" and "PERENNIAL WEEDS RATE SECTIONS" of this label. For cotton regrowth inhibition, apply 11 to 44 fluid ounces of this product per acre.  
Up to 44 fluid ounces of this product may be applied using either aerial or ground spray equipment. Apply after sufficient bolls have developed to produce the desired yield of cotton. Applications made prior to this time could affect maximum yield potential.  
**TANK MIXTURES:** This product may be tank-mixed with DEF® 6, Folex®, Ginstar®, or Prep® to provide additional enhancement of cotton leaf drop.  
**PRECAUTIONS, RESTRICTIONS:** Allow a minimum of 7 days between application and harvest of cotton. Preharvest application is not recommended for cotton grown for seed, as a reduction in germination or vigor may occur.

## 8.4 Fallow Systems

**LABELLED CROPS:** This product may be applied during the fallow period prior to planting or emergence of any crop on this label.  
**TYPES OF APPLICATIONS:** Chemical Fallow, Aid-to-Tillage.

#### Chemical Fallow

**USE INSTRUCTIONS:** This product may be applied during the fallow period prior to planting or emergence of any crop listed on this label. This product may be used as a substitute for tillage to control annual weeds in fallow fields. Also, broadcast or spot treatments will control or suppress many perennial weeds in fallow fields. Ground or aerial application equipment may be used. Tank mixtures with 2,4-D and dicamba may be used. Applications up to 44 fluid ounces per acre may be made by aerial application in fallow sites where there is sufficient buffer to prevent injury due to drift onto adjacent crops.

**PRECAUTIONS, RESTRICTIONS:** For any crop not listed on this label, applications must be made at least 30 days prior to planting.

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

#### Aid-to-Tillage

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

**PRECAUTIONS, RESTRICTIONS:** Tank mixtures with residual herbicides may result in reduced performance.

## 8.5 Grain Sorghum (Milo)

**TYPES OF APPLICATIONS:** Those listed in Section 8.0 plus the following: Spot Treatment, Over-the-Top Wiper Applications, Preharvest.

#### Preplant, Preemergence, At-Planting

**USE INSTRUCTIONS:** This product may be applied alone or in tank mixture before, during or after planting grain sorghum. Applications must be made prior to emergence of the crop.  
**TANK MIXTURES:** This product may be tank mixed with the following products provided that the specific product is registered for application prior to planting grain sorghum. Apply these tank mixtures in 10 to 20 gallons of water or 10 to 60 gallons of nitrogen solution per acre.

Atrazine	IntrRo™
Bicep II MAGNUM	Lariat
Bullet	Lasso
Dual II MAGNUM	Micro-Tech

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

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

**USE INSTRUCTIONS:** This product may be applied as a spot treatment in grain sorghum. Make spot treatments before heading of milo. This product may be applied with wiper applicators to control or suppress the weeds listed under "Wiper Applicators" in the "Selective Equipment" section of this label.

**PRECAUTIONS, RESTRICTIONS:** For spot treatment, do not treat more than 10 percent of the total field area to be harvested. The crop receiving spray in treated area will be killed. Take care to avoid drift or spray outside target area for the same reason.

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

#### Hooded Sprayers

**USE INSTRUCTIONS:** This product may be used through hooded sprayers for weed control between the rows of milo. Only hooded sprayers that completely enclose the spray pattern may be used. See additional instruction for the use of hooded sprayers in the "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label.  
Crop injury may occur when the foliage of treated weeds comes into direct contact with leaves of the crop. Do not apply this product when the leaves of the crop are growing in direct contact with weeds to be treated. Droplets, mist, foam or splatter of the herbicide solution may contact the crop and cause discoloration, stunting or destruction.

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

#### Preharvest

**USE INSTRUCTIONS:** Make applications at 30 percent grain moisture or less.  
**PRECAUTIONS, RESTRICTIONS:** Do not apply more than 44 fluid ounces of this product per acre. As with other herbicides that cause sudden plant death, avoid preharvest

applications of this product to milo infected with charcoal rot as lodging can occur. Allow a minimum of 7 days between application and harvest of sorghum. Preharvest application is not recommended for sorghum grown for seed, as a reduction in germination or vigor may occur.

#### Post-Harvest

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

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

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

## 8.6 Oil Seed Crops

**LABELED CROPS:** Canola, Flax, Mustard (seed), Rape, Safflower, Sunflower.

**TYPES OF APPLICATIONS:** Those listed in Section 8.0.

**USE INSTRUCTIONS:** This product may be applied before, during or after planting oil seed crops. Broadcast applications must be made prior to emergence of the listed oil seed crops. Wiper applicators or hooded sprayers may be used between the rows once the crop is established.

**TANK MIXTURES:** For sunflowers, a tank mixture with Prowl may be applied before, during or after planting in conventional tillage systems, into a cover crop, established sod or in previous crop residue.

**PRECAUTIONS, RESTRICTIONS:** Do not apply more than 44 fluid ounces of this product per acre on canola. Do not apply more than 22 fluid ounces of this product per acre for sunflowers as a single preplant or preemergent application per year. Do not feed or graze sunflower forage following application of this product.

## 8.7 Soybeans

**TYPES OF APPLICATIONS:** Those listed in Section 8.0 plus the following: Spot Treatment, Preharvest, Selective Equipment.

#### Preplant, Preemergence, At-Planting

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

**TANK MIXTURES:** Apply these tank mixtures in 10 to 20 gallons of water per acre.

Aim®	Gauntlet®
Amplify™	Lasso
Assure® II	Linex
Authority®	Lorox/Linuron
Boundary®	Lorox Plus®
Canopy®	Micro-Tech
Canopy XL®	Prowl
Command	Pursuit®
Command Xtra	Pursuit Plus
Domain®	Reflex®
Dual MAGNUM	Scepter®
Dual II MAGNUM	Sencor®/Lexone®
FirstRate®	Squadron®
Flexstar™	Steel®
Frontier/Outlook	Valor®
Fusion®	

This product may be tank-mixed with 2,4-D or 2,4-DB, provided that the specific product is registered for application prior to planting soybeans. See the 2,4-D label for intervals between application and planting.

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

**PRECAUTIONS, RESTRICTIONS:** Tank mixtures with some of the above listed herbicides may result in reduced weed control due to antagonism. Read and carefully observe the cautionary statements and all other information appearing on the product labels, supplemental labeling or fact sheets published separately for all herbicides used. Use according to the most restrictive directions for each product in the mixture.

#### Spot Treatment

**USE INSTRUCTIONS:** For spot treatments, apply this product prior to initial pod set in soybeans.

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

#### Preharvest

**USE INSTRUCTIONS:** This product provides weed control when applied prior to harvest of soybeans.

Apply at rates given in the "ANNUAL WEEDS" and "PERENNIAL WEEDS RATE SECTIONS". This product may be applied using either aerial or ground spray equipment. Apply after pods have set and lost all green color. Care should be taken to avoid excessive seed shatter loss due to ground application equipment.

**PRECAUTIONS, RESTRICTIONS:** Do not apply more than 3.3 quarts per acre of this product for preharvest applications. Do not apply more than 44 fluid ounces per acre of this product by air. Allow a minimum of 7 days between application and harvest of soybeans. Do not graze or harvest treated hay or fodder for livestock feed within 25 days of last preharvest application. (If the application rate is 22 fluid ounces per acre or lower, the grazing restriction is reduced to 14 days after last preharvest application.) Preharvest application is not recommended for soybeans grown for seed, as a reduction in germination or vigor may occur.

#### Selective Equipment

**USE INSTRUCTIONS:** This product may be applied through recirculating sprayers, shielded applicators, hooded sprayers, wiper applicators or sponge bars in soybeans. Allow at least 7 days between application and harvest.

**PRECAUTIONS, RESTRICTIONS:** See the "Selective Equipment" part of the "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label for information on proper use and calibration of this equipment.

## 9.0 PASTURE GRASSES AND RANGELANDS

### 9.1 Conservation Reserve Program (CRP)

**TYPES OF APPLICATIONS:** Renovation (Rotating out of CRP), Site Preparation, Postemergence Weed Control in Dormant CRP Grasses, Over-the-Top Wiper Applications.

#### 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 recommendations. For any crop not listed for treatment in this label, applications must be made at least 30 days prior to planting.

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

**USE INSTRUCTIONS:** This product may be used to suppress competitive growth and seed production of undesirable vegetation in CRP acres. Such applications may be made with wiper application equipment or as a broadcast or spot treatment to dormant CRP grasses. For selective applications with broadcast spray equipment, apply 8 to 11 fluid ounces of this product per acre in early spring before desirable CRP grasses, such as crested and tall wheatgrass, break dormancy and initiate green growth. Late fall applications can be made after desirable perennial grasses have reached dormancy.

**PRECAUTIONS, RESTRICTIONS:** Some stunting of CRP perennial grasses will occur if broadcast applications are made when plants are not dormant. No waiting period is required between application and grazing or harvesting for feed. Do not apply more than 2 quarts per acre per year onto CRP grasses.

### 9.2 Grass Seed Production

**LABELED CROPS:** Any grass (*Gramineae* family) except Corn, Sorghum, Sugarcane and those listed in this label under "Cereal and Grain Crops".

**TYPES OF APPLICATIONS:** Preplant, Preemergence, At-Planting, Renovation, Removal of Established Stands, Site Preparation, Shielded Sprayers, Over-the-Top Wiper Applications, Spot Treatment, Creating Rows in Annual Ryegrass.

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

**USE INSTRUCTIONS:** This product controls most existing vegetation prior to renovating turf or forage grass seed areas. It may also be used to destroy remaining undesired grass vegetation when production fields are converted to alternate species or crops. Make applications before, during, or after planting or for renovation. For maximum control of existing vegetation, delay planting to determine if any regrowth from escaped underground plant parts occurs. Where existing vegetation is growing under mowed turfgrass management, apply this product after omitting at least one regular mowing to allow sufficient growth for good interception of the spray. Where repeat treatments are necessary, sufficient regrowth must be attained prior to application. For warm-season grasses, such as Bermudagrass, summer or fall applications provide best control.

**PRECAUTIONS, RESTRICTIONS:** Do not disturb soil or underground plant parts before treatment. Tillage or renovation techniques such as vertical mowing, coring or slicing should be delayed for 7 days after application to allow proper translocation into underground plant parts. If application rates total 2 quarts per acre or less, no waiting period between treatment and feeding or livestock grazing is required. If the rate is greater than 2 quarts per acre, remove domestic livestock before application and wait 8 weeks after application before grazing or harvesting. For any crop not listed for treatment in this label, applications must be made at least 30 days prior to planting. Applications must be made prior to the emergence of the crop to avoid crop injury.

#### Shielded Sprayers

**USE INSTRUCTIONS:** Apply 22 to 64 fluid ounces of this product in 10 to 20 gallons of water per acre to control weeds between grass seed rows. Uniform planting in straight rows aid in shielded sprayer applications. Best results are obtained when the grass seed crop is small enough to easily pass by the protective shields. For additional instructions, see "Hooded and Shielded Applicators" in the "Selective Equipment" section.



**PRECAUTIONS, RESTRICTIONS:** Contact of this product in any manner to any vegetation to which treatment is not intended may cause damage. Such damage shall be the sole responsibility of the applicator.

#### **Over-the-Top Wiper Applications**

**USE INSTRUCTIONS:** Applicators should be adjusted so that the wiper contact point is at least 2 inches above the desirable vegetation. Weeds should be a minimum of 6 inches above the desirable vegetation. Better results may be obtained when more of the weed is exposed to the herbicide solution. Weeds not contacted by the herbicide solution will not be affected. This may occur in dense clumps, severe infestations, or when height of weeds varies so that not all weeds are contacted. In these instances, repeat treatments may be necessary. For additional instructions, see “Wiper Applicators” in the “Selective Equipment” section.

**PRECAUTIONS, RESTRICTIONS:** Contact of the herbicide solution with desirable vegetation may result in damage or destruction.

#### **Spot Treatment**

**USE INSTRUCTIONS:** Use a 1.0-percent solution.

**PRECAUTIONS, RESTRICTIONS:** Apply this product prior to heading of grasses grown for seed. The crop receiving the spray in the treated area will be killed. Take care to avoid drift or spray outside the target area for the same reason.

#### **Creating Rows in Annual Ryegrass**

**USE INSTRUCTIONS:** Use 11 to 22 fluid ounces of this product per acre. Use the higher rate when the ryegrass is greater than 6 inches tall. Best results are obtained when applications are made before the ryegrass reaches 6 inches in height.

**PRECAUTIONS, RESTRICTIONS:** Set nozzle heights to allow the establishment of the desired row spacing while preventing spray droplets, spray fines, or drift to contact the ryegrass plants not treated. Use of low-pressure nozzles, or drop nozzles designed to target the application over a narrow band are recommended.

**Grower assumes all responsibility for crop losses from misapplication.**

## **9.3 Pastures**

**LABELLED CROPS:** Any grass (*Gramineae* family) except Corn, Sorghum, Sugarcane and those listed in this label under “Cereal and Grain Crops”, including Bahiagrass, Bermudagrass, Bluegrass, Brome, Fescue, Guinea grass, Kikuyugrass, Orchardgrass, Pangola grass, Ryegrass, Timothy, Wheatgrass.

**TYPES OF APPLICATIONS:** Preplant, Preemergence, Pasture Renovation, Spot Treatment, Over-the-Top Wiper Applications, Postemergent Weed Control (Broadcast Treatments).

#### **Preplant, Preemergence, Pasture Renovation**

**USE INSTRUCTIONS:** This product may be applied prior to planting or emergence of forage grasses. In addition, this product may be used to control perennial pasture species listed on this label prior to re-planting.

**PRECAUTIONS, RESTRICTIONS:** If application rates total 2 quarts per acre or less, no waiting period between treatment and feeding of livestock grazing is required. If the rate is greater than 2 quarts per acre, remove domestic livestock before application and wait 8 weeks after application before grazing or harvesting. Crops listed for treatment in this label may be planted into the treated area at any time; for other crops, wait 30 days between application and planting.

#### **Spot Treatment, Over-the-Top Wiper Applications**

**USE INSTRUCTIONS:** This product may be applied as a spot treatment or with wiper applicators in pastures. Applications may be made in the same area at 30-day intervals.

**PRECAUTIONS, RESTRICTIONS:** For spot treatments or wiper application methods using rates of 2 quarts per acre or less, the entire field or any portion of it may be treated. When spot treatments or wiper application are made using rates above 2 quarts per acre, no more than 10 percent of the total pasture may be treated at any one time. To achieve maximum performance, remove domestic livestock before application and wait 7 days after application before grazing livestock or harvesting.

#### **Postemergent Weed Control (Broadcast Treatments)**

**USE INSTRUCTIONS:** This product may be used to suppress competitive growth and seed production of annual weeds and undesirable vegetation in pastures. For selective applications with broadcast spray equipment, apply 8 to 11 fluid ounces of this product per acre in early spring before desirable perennial grasses break dormancy and initiate green growth. Late fall applications can be made after desirable perennial grasses have reached dormancy.

**PRECAUTIONS, RESTRICTIONS:** Some stunting of perennial grasses will occur if broadcast applications are made when plants are not dormant. No waiting period is required between application and grazing or harvesting for feed. Use of higher application rates will cause stand reductions. Do not apply more than 2 quarts per acre per year onto pasture grasses except for renovation uses (see instructions above). If replanting is needed due to severe stand reduction, applications must be made at least 30 days prior to planting any crop not listed for treatment in this label.

## **9.4 Rangelands**

**TYPES OF APPLICATIONS:** Postemergence.

This product will control or suppress many annual weeds growing in perennial cool and warm-season grass rangelands.

Preventing viable seed production is key to the successful control and invasion of annual grassy weeds in rangelands. Follow-up applications in sequential years should eliminate most of the viable seeds.

Grazing of treated areas should be delayed to encourage growth of desirable perennials. Allowing desirable perennials to flower and reseed in the treated area will encourage successful transition.

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

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

**PRECAUTIONS, RESTRICTIONS:** Slight discoloration of the desirable grasses may occur, but they will regreen and regrow under moist soil conditions as effects of this product wear off. Do not use ammonium sulfate when spraying rangeland grasses with this product. No waiting period between treatment and feeding of livestock grazing is required. Do not apply more than 2 quarts per acre per year.

## **10.0 NON-CROP USES AROUND THE FARMSTEAD**

**TYPES OF APPLICATIONS:** General Weed Control, Trim-and-Edge, Chemical Mowing, Cut Stump, Habitat Management.

### **10.1 General Weed Control and Trim-and-Edge**

**USE INSTRUCTIONS:** This product may be used to control annual weeds and perennial weeds which are found in any part of the farmstead, including building foundations, along and in fences, in dry ditches and canals, along ditchbanks, farm roads, shelterbelts, prior to landscape plantings and equipment storage areas.

**TANK MIXTURES:** This product may be tank mixed with the following products, provided that the specific product is registered for use on such non-crop sites. Refer to these product labels for approved farmstead sites and application rates. For annual weeds, use 22 fluid ounces per acre of this product when weeds are less than 6 inches tall, 32 fluid ounces per acre when weeds are 6 to 12 inches tall and 44 fluid ounces per acre when weeds are greater than 12 inches tall. For perennial weeds, apply 44 fluid ounces to 3.3 quarts per acre in these tank mixes. For tank mixtures with these products through backpack sprayers, handguns or other high-volume spray-to-wet applications, see the “Annual Weeds—Hand-Held or High-Volume Equipment” section of this label for recommended rates.

Arsenal®	Plateau®
Banvel/Clarity	Princep® DF
Barricade® 65WG	Princep Liquid
Diuron	Ronstar® 50 WP
Endurance®	Sahara®
Escort®	Simazine
Karmex DF	Surflan®
Krovar® I DF	Telar®
Oust®	Vanquish®
Pendulum® 3.3 EC	2,4-D
Pendulum WDG	

### **10.2 Chemical Mowing**

**USE INSTRUCTIONS:** This product will suppress perennial grasses listed in this section to serve as a substitute for mowing. Use 4 fluid ounces of this product per acre when treating Kentucky bluegrass. Use 4 fluid ounces of this product per acre when treating tall fescue, fine fescue, orchardgrass, bahiagrass or quackgrass covers. Use 11 fluid ounces of this product per acre when treating Bermudagrass. Use 44 fluid ounces of this product per acre when treating torpedograss or paragrass. Apply treatments in 10 to 20 gallons of spray solution per acre. Chemical mowing applications may be made along farm ditches and other parts of farmsteads.

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

### **10.3 Cut Stump**

**TYPES OF APPLICATION:** Treating cut stumps in any non-crop site listed on this label

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



Alder	Reed, giant
Eucalyptus	Saltcedar
Madrone	Sweetgum
Oak	Tan oak
Pepper, Brazilian	Willow
Pine, Austrian	

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

## 10.4 Habitat Management

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

### Habitat Restoration and Maintenance

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

### Wildlife Food Plots

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

PRECAUTIONS, RESTRICTIONS: There are no rotational restrictions for planting any wildlife food species or for allowing native species to repopulate the area following applications of this product.

## 11.0 ANNUAL WEEDS RATE SECTION

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

- 22 fluid ounces per acre — grass and broadleaf annual weeds less than 6 inches in height or circumference and vines less than 3 inches in length.
- 32 fluid ounces per acre — grass and broadleaf annual weeds 6 to 12 inches in height or circumference and vines 3 to 6 inches in length.
- 44 fluid ounces per acre — grass and broadleaf annual weeds greater than 12 inches in height or circumference and vines greater than 6 inches in length.

WHEN WATER CARRIER VOLUMES ARE BETWEEN 3 AND 15 GALLONS PER ACRE FOR GROUND APPLICATIONS AND BETWEEN 3 AND 5 GALLONS PER ACRE FOR AERIAL APPLICATIONS, USE THE RATES SPECIFIED FOR INDIVIDUAL WEEDS AS FOLLOW IN THE "ANNUAL WEEDS RATE TABLE" (Alphabetically by Species).

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

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

Maximum size refers to the maximum plant height, length of runners for vines or circumference of rosette plants in inches.

Do not tank-mix with soil residual herbicides when using these rates unless otherwise specified.

For weeds that have been mowed, grazed or cut, allow regrowth to occur prior to treatment.

This product may be used up to 44 fluid ounces per acre where heavy weed densities exist.

ANNUAL WEEDS RATE TABLE

WEED SPECIES	RATE (fluid ounces per acre)			
	11	16	22	32
	Maximum size (in inches)			
Barley	18	18+	-	-
Barnyardgrass	-	3	6	7
Bittercress	12	20	-	-
Bluegrass, annual	10	-	-	-
Bluegrass, bulbous	6	-	-	-
Brome, downy <sup>1,2</sup>	6	12	-	-
Brome, Japanese	6	12	24	-
Buckwheat, wild <sup>3</sup>	-	1	2	-
Buttercup	12	20	-	-
Carolina geranium	-	-	4	9
Cheat <sup>2</sup>	6	20	-	-
Chickweed	-	12	18	-
Cocklebur	12	18	24	36
Coreopsis, plains	-	6	12	18

Corn, volunteer	6	12	20	-	-
Crabgrass	3	6	12	-	-
Dwarf dandelion	12	-	-	-	-
Fall panicum	4	-	6	-	12
Field pennycress	6	12	-	-	-
Filaree	-	-	6	-	12
Fleabane, hairy ( <i>Conyza bonariensis</i> ) -	-	-	6	-	10
Florida pusley	-	-	4	-	6
Foxtail; giant, bristly, yellow	6	12	20	-	-
Foxtail, green	12	-	-	-	-
Goatgrass, jointed	6	12	-	-	-
Grain sorghum (milo)	6	12	20	-	-
Groundcherry	-	3	6	-	9
Groundsel, common	-	6	10	-	-
Hemp sesbania	-	2	4	6	8
Henbit	-	-	6	-	12
Horseweed/Marestail ( <i>Conyza canadensis</i> )	-	6	12	-	18
Johnsongrass, seedling	6	12	18	-	24
Kochia <sup>4</sup>	-	3 to 6	12	-	-
Lambsquarters	-	6	12	-	20
London rocket	6	-	24	-	-
Morningglory, annual ( <i>Ipomoea spp</i> )	-	-	3	-	6
Mustard, blue	6	12	18	-	-
Mustard, tansy	6	12	18	-	-
Mustard, tumble	6	12	18	-	-
Mustard, wild	6	12	18	-	-
Nightshade, black	-	4	6	-	12
Nightshade, hairy	-	4	6	-	12
Oats	3	6	18	-	-
Pigweed species	-	12	18	24	-
Prickly lettuce	-	6	12	-	-
Rye, volunteer/cereal <sup>2</sup>	6	18	18+	-	-
Ryegrass	-	-	6	-	12
Sandbur, field	6	12	-	-	-
Sandbur, longspine	6	12	-	-	-
Shattercane	6	12	20	-	-
Shepherd's-purse	6	12	-	-	-
Sowthistle, annual	-	-	6	-	12
Sprangletop	6	12	20	-	-
Spurge, prostrate	-	6	12	-	-
Spurge, spotted	-	6	12	-	-
Stinkgrass	-	12	-	-	-
Sunflower	12	18	-	-	-
Swinecress	-	5	12	-	-
Texas panicum	6	8	12	-	24
Thistle, Russian <sup>5</sup>	-	6	12	-	-
Velvetleaf	-	-	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	-	-	-

<sup>1</sup>For control of downy brome in no-till systems, use 16 fluid ounces per acre.

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

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

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

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

### 11.1 Annual Weeds—Tank Mixtures with 2,4-D, Dicamba or Tordon 22K

8 to 11 fluid ounces of this product plus 0.25 pound of dicamba or 0.5 pound of 2,4-D or 1 to 2 fluid ounces of Tordon 22K per acre will control the following weeds with the maximum height or length indicated: 6 inches—prickly lettuce, marestail/horseweed, morning glory, kochia (dicamba only) wild buckwheat (Tordon 22K only); 12 inches—cocklebur, lambsquarters, pigweed, Russian thistle (2,4-D only).

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

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

## 11.2 Annual Weeds—Hand-Held or High-Volume Equipment

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

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

When using application methods that result in less than complete coverage, use a 4 percent solution for annual and perennial weeds.

## 11.3 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.

16 to 20 fluid ounces of this product plus 1 to 2 pounds of atrazine per acre will control the following weeds: Barnyardgrass (requires 20 fluid ounces for control), Downy brome, Green foxtail, Lambsquarters, Prickly lettuce, Tansy mustard, Pigweed, Field sandbur, Stinkgrass, Russian thistle, Volunteer wheat, Witchgrass and Kochia (add 0.12 pound of dicamba for control). Ensure that the specific atrazine product is registered for application at the desired site.

## 12.0 PERENNIAL WEEDS RATE SECTION

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.

Best results are obtained when soil moisture is adequate for active weed growth.

Weed Species	Rate (QT/A)	Water Volume (GPA)	Hand-Held % Solution
Alfalfa	1-1.5	3-10	1.5%

Make applications after the last hay cutting in the fall. Allow alfalfa to regrow to a height of 6 to 8 inches or more prior to treatment. Applications should be followed with deep tillage at least 7 days after treatment, but before soil freeze-up.

Bindweed, field	0.4-3.3	3-20	1.5%
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Do not treat field bindweed under drought stress as good soil moisture is necessary for active growth.

For control, apply 2.5 to 3.3 quarts of this product per acre. Apply when the weeds are at or beyond full bloom. For best results, apply in late summer or fall. Fall treatments must be applied before a killing frost.

Also for control, apply 44 fluid ounces of this product plus 0.5 pound of dicamba in 10 to 20 gallons of water per acre. Do not apply by air.

For suppression on irrigated agricultural land, apply 22 to 44 fluid ounces of this product plus 1.0 pound of 2,4-D in 10 to 20 gallons of water per acre with ground equipment only. Applications should be made following harvest or in fall fallow ground when the bindweed is actively growing and the majority of runners are 12 inches or more in length. The use of at least one irrigation will promote active bindweed growth.

For suppression, apply 11 fluid ounces of this product plus 0.5 pound of 2,4-D in 3 to 10 gallons of water per acre for ground applications and 3 to 5 gallons of water per acre for aerial applications. Apply by air in fallow and reduced tillage systems only. Applications should be delayed until maximum emergence has occurred and when vines are between 6 to 18 inches in length.

Blueweed, Texas	2-3.3	3-40	1.5%
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Apply 2.5 to 3.3 quarts of this product per acre west of the Mississippi River and 2 to 2.5 quarts per acre east of the Mississippi River. Apply when plants are at or beyond full bloom. New leaf development indicates active growth. For best results, apply in late summer or fall. Fall treatments must be applied before a killing frost.

Bromegrass, smooth	0.7-1.5	3-40	1.5%
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Apply 44 fluid ounces of this product in 10 to 40 gallons of water per acre when most plants have reached boot-to-early seedhead stage of development. For partial control in pasture or hay crop renovation, apply 22 to 32 fluid ounces of this product in 3 to 10 gallons of water per acre. Apply to actively growing plants when most have reached 4 to 12 inches in height.

Dock, curly <sup>1</sup>	2-3.3	3-40	1.5%
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Also for control, apply 11 to 22 fluid ounces of this product plus 0.5 to 1.0 pound of 2,4-D in 3 to 10 gallons of water per acre.

Johnsongrass	0.4-2	3-40	1%
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In annual cropping systems apply 22 to 44 fluid ounces of this product per acre. Apply 22 fluid ounces of this product in 3 to 10 gallons of water per acre. Use 44 fluid ounces of this product when applying 10 to 40 gallons of water per acre. In non-crop, or areas where annual tillage (no-till) is not practiced, apply 44 to 64 fluid ounces of this product in 10 to 40 gallons of water per acre.

For best results, apply when most plants have reached the boot-to-head stage of growth or in the fall prior to frost. Allow 7 or more days after application before tillage. Do not tank-mix with residual herbicides when using 22 fluid ounces of this product per acre.

For burndown of Johnsongrass, apply 11 fluid ounces of this product in 3 to 10 gallons of water per acre before the plants reach a height of 12 inches. For this use, allow at least 3 days after treatment before tillage.

Spot treatment (partial control or suppression)—Apply a 0.7 percent solution of this product when Johnsongrass is 12 to 18 inches in height. Coverage should be uniform and complete.

Mullein, common <sup>1</sup>	2-3.3	3-20	1.5%
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Nightshade, silverleaf	1.5	3-10	1.5%
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Applications should be made when at least 60 percent of the plants have berries. Fall treatments must be applied before a killing frost.

Quackgrass	0.7-2	3-40	1.5%
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In annual cropping systems, or in pastures and sods followed by deep tillage: Apply 22 fluid ounces of this product in 3 to 10 gallons of water per acre. For 10 to 40 gallons of water per acre, apply 44 fluid ounces of this product. Do not tank mix with residual herbicides when using the 22-fluid-ounce rate. Spray when quackgrass is 6 to 8 inches in height. Do not till between harvest and fall applications or in fall or spring prior to spring application. Allow 3 or more days after application before tillage. In pastures or sods, use a moldboard plow for best results.

In pastures, sods or non-crop areas where deep tillage does not follow application: Apply 44 to 64 fluid ounces of this product in 10 to 40 gallons of water per acre when the quackgrass is greater than 8 inches tall.

Ryegrass, perennial	0.7-2	3-40	1%
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In annual cropping systems apply 22 to 44 fluid ounces of this product per acre. Apply 22 fluid ounces of this product in 3 to 10 gallons of water per acre. Use 44 fluid ounces of this product when applying 10 to 40 gallons of water per acre. In non-crop, or areas where annual tillage (no-till) is not practiced, apply 44 to 64 fluid ounces of this product in 10 to 40 gallons of water per acre.

For best results, apply when most plants have reached the boot-to-head stage of growth or in the fall prior to frost. Do not tank-mix with residual herbicides when using 22 fluid ounces of this product per acre.

Spurge, leafy	—	3-10	1.5%
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For suppression, apply 11 fluid ounces of this product plus 0.5 pound of 2,4-D in 3 to 10 gallons of water per acre in the late summer or fall. If mowing has occurred prior to treatment, apply when most of the plants are 12 inches tall.

Thistle, Canada	1.5-2	3-40	1.5%
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Apply when most plants are at or beyond the bud stage of growth. After harvest, mowing or tillage in the late summer or fall, allow at least 4 weeks for initiation of active growth and rosette development prior to the application of this product. Fall treatments must be applied before a killing frost. Allow 3 or more days after application before tillage.

For suppression in the spring, apply 22 fluid ounces of this product, or 11 fluid ounces of this product plus 0.5 pound of 2,4-D, in 3 to 10 gallons of water per acre. Allow rosette regrowth to a minimum of 6 inches in diameter before treating. Applications can be made as long as leaves are still green and plants are actively growing at the time of application. Allow 3 or more days after application before tillage.

Wheatgrass, western <sup>2</sup>	1.5-2	3-40	1.5%
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<sup>1</sup> Apply when most plants have reached the early bud stage of growth.

<sup>2</sup> Apply when most plants have reached the early heading stage of growth.

## 13.0 LIMIT OF WARRANTY AND LIABILITY

Monsanto Company 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. 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 this Company of any claims whether based in contract, negligence, strict liability, other tort or otherwise.

Buyer and all users are responsible for all loss or damage from use or handling which results from conditions beyond the control of this Company, including, but not limited to, incompatibility with products other than those set forth in the Directions, application to or contact with desirable vegetation, 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.

This Company does not warrant any product reformulated or repackaged from this product except in accordance with this Company’s stewardship requirements and with express written permission from this Company.

THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE LIMIT OF THE LIABILITY OF THIS COMPANY 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 THIS COMPANY OR ANY OTHER SELLER, THE REPLACEMENT OF SUCH QUANTITY, OR, IF NOT ACQUIRED BY PURCHASE, REPLACEMENT OF SUCH QUANTITY. IN NO EVENT SHALL THIS COMPANY OR ANY OTHER SELLER BE LIABLE FOR ANY INCIDENTAL, CONSEQUENTIAL OR SPECIAL DAMAGES.

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