524-543 5-22-2003 1/45

U.S. ENVIRONMENTAL PROTECTION AGENCY
Office of Pesticide Programs
Registration Division (H7505C)
401 "M" St., S.W.
Washington, D.C. 20460

NOTICE OF PESTICIDE:
_x_ Registration
__ Reregistration

(under FIFRA, as amended)

EPA Reg. Number:	Date of Issuance:
524-543	MAY 22 2003

Term of Issuance: **Conditional**

Name of Pesticide Product: **MON 78481 Herbicide**

Name and Address of Registrant (include ZIP Code):

Monsanto Company
600 13 th Street, N. W. Suite 660
Washington, DC 20005

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

On the basis of information furnished by the registrant, the above named pesticide is hereby registered/reregistered under the Federal Insecticide, Fungicide and Rodenticide Act.

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

This product is conditionally registered in accordance with FIFRA section 3(c)(7)(A) provided that you:

1. Submit/cite all data required for registration/reregistration of your product when the Agency requires all registrants of similar products to submit such data.

2. Add the phrase "EPA Registration No. 524-543" before you release the product for shipment.

3. Submit three (3) copies of your final printed labeling before you release the product for shipment.

If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA sec. 6(e). Your release for shipment of this product constitutes acceptance of these conditions.

A stamped copy of the label is enclosed for your records.

Signature of Approving Official:	Date:
Vuke K Walters for James A Tompkins	5/22/03

EPA Form 8570-6

2/45

MASTER LABEL FOR EPA REG. NO. 524-~~XXX~~ 475 543

Registered Brand Names:
MON 78481 Herbicide

Table of Contents for Master Label

See each label part for more detailed table of contents

I. MAIN LABEL FOR FOOD CROP USES

[INSERT BRAND NAME]

Herbicide

Complete Directions for Use

EPA Reg. No. 524-XXX

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.

"The President's Green Chemistry Award was presented in 1996 to Monsanto for its innovative "zero-waste" process in the manufacture of Roundup Herbicide."

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

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.

Refillable Container Label Statement:

THIS IS AN END-USE PRODUCT. MONSANTO DOES NOT INTEND AND HAS NOT REGISTERED IT FOR REFORMULATION. IT IS INTENDED THAT REPACKAGING BE ONLY IN ACCORDANCE WITH A MONSANTO REPACKAGING OR TOLL REPACKAGING AGREEMENT.

Non-refillable Container Label Statement:

THIS IS AN END-USE PRODUCT. MONSANTO DOES NOT INTEND AND HAS NOT REGISTERED IT FOR REFORMULATION OR REPACKAGING.

CONTENTS

1.0 INGREDIENTS

ACTIVE INGREDIENT:	
*Glyphosate, N-(phosphonomethyl)glycine, in the form of its potassium salt)	44.76 %
**Carfentrazone-ethyl: Ethyl α,2-dichloro-5-[4-(difluoromethyl)-4,5-dihydro-3-methyl-5-oxo-1H-1,2,4 -triazol-1-yl]-4- fluorobenzenepropanoate	0.19 %
OTHER INGREDIENTS:	55.05 %
	100.00 %

*Contains 590 grams per litre or 4.9 pounds per U.S. gallon of the active ingredient glyphosate, in the form of its potassium salt. Equivalent to 480 grams per litre or 4.0 pounds per U.S. gallon of the acid, glyphosate.

** Contains 2.5 grams per litre or 0.02 pounds per U.S. gallon of the active ingredient carfentrazone-ethyl.

Contains petroleum distillates.

U.S. 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

ACCEPTED
MAY 22 2003
Under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, for the pesticide registered under EPA Reg. No 524-543

3.0 PRECAUTIONARY STATEMENTS

3.1 Hazards to Humans and Domestic Animals

Keep out of reach of children.

DANGER! PELIGRO!

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

CORROSIVE. CAUSES IRREVERSIBLE EYE DAMAGE.

Avoid contact with skin or clothing. Do not get in eyes or on clothing.

FIRST AID: Call a poison control center or doctor for treatment advice.

IF IN EYES
- Hold eye open and rinse slowly and gently with water for 15 - 20 minutes.
- Remove contact lenses if present after the first 5 minutes then continue rinsing eye.

IF ON SKIN
- Take off contaminated clothing.
- Rinse skin immediately with plenty of water for 15 - 20 minutes.

IF SWALLOWED:

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

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. This product is identified as **[INSERT BRAND NAME]**, EPA Registration No. **524-XXX.** You may also contact (314) 694-4000, collect day or night, for emergency medical treatment information. **NOTE TO PHYSICIAN:** Probable mucosal damage may contraindicate the use of gastric lavage.

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 F on an EPA chemical-resistance category chart.

Applicators and other handlers must wear: long-sleeved shirt and long pants, socks, shoes, protective eyewear, chemical resistant (nitrile or butyl) gloves. Discard clothing and other adsorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. Follow manufacturer's instructions for cleaning/maintaining PPE (Personal Protective Equipment). If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

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 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.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

3.2 Environmental Hazards

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

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.

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 12 hours. PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is: coveralls, socks, shoes, chemical resistant (nitrile or butyl) gloves, and protective eyewear.

Non-Agricultural Use Requirements
The requirements in this box apply to uses of this product that are NOT within the scope of the 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 to prevent transfer of this product onto desirable vegetation.

4.0 STORAGE AND DISPOSAL

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

Keep container closed to prevent spills and contamination.

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 STORAGE AND DISPOSAL instructions.

Container Label Statements:

(FOR REFILLABLE PORTABLE CONTAINERS)
Do not reuse this container except for refill in accordance with a valid Monsanto Repackaging or Toll Repackaging Agreement. If not refilled or returned to the authorized repackaging facility, triple rinse container, then puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

(FOR BULK CONTAINERS)
Triple rinse emptied bulk container. Then offer for recycling or reconditioning, or dispose of in a manner approved by state and local authorities.

(FOR PLASTIC 1-WAY CONTAINERS & BOTTLES)
Do not reuse container. Triple rinse container, then puncture and dispose of in a sanitary landfill. or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

(FOR DRUMS)
Do not reuse container. Return container per the Monsanto container return program. If not returned, triple rinse container, then puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

5.0 GENERAL INFORMATION
(How This Product Works)

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 weeds, perennial weeds, woody brush and trees. It is formulated as a liquid for mixing with water. 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.

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 1 to 3 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", "PERENNIAL WEEDS", and "WOODY BRUSH AND TREES RATE TABLES" 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.

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

Cultural Considerations: Reduced control may result when applications are made to annual 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.

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.

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 not recommended on this label may result in reduced performance.

Annual Maximum Use Rate: Except as otherwise specified in a crop section of this label, the combined total of all treatments must not exceed 6 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.

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. If a nonionic surfactant is used, add it to the spray tank before completing the filling process.

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

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

Keep 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 50mesh.

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

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:

11/45

Spray Solution

Desired Volume	Amount of [INSERT BRAND NAME] 0.5%	0.75%	1%	1.25%	1.5%	5%
1 gal	0.5 oz	1 oz	1.3 oz	1.6 oz	1.9 oz	6.4 oz
25 gal	1 pt	1.5 pt	1 qt	1.3 qt	1.5 qt	5 qt
100 gal	2 qt	3 qt	1 gal	1.3 gal	1.5 gal	5 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

When needed, nonionic surfactants (NIS) or wetting agents that have at least 70 percent active ingredient and are labeled for use with herbicides may be used at levels up to 0.5% volume to volume (2 quarts NIS per 100 gallons) of finished spray volume. Do not reduce rates of this herbicide when adding surfactants. Read and carefully observe cautionary statements and other information appearing on the additives label.

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 Control Additives

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

7.0 APPLICATION EQUIPMENT AND TECHNIQUES

Do not apply this product through any type of irrigation system.

12/45

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, lances and other hand-held and motorized spray equipment used to direct the spray onto weed foliage.

Selective Equipment – Hooded sprayers.

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

FOR AERIAL APPLICATION IN CALIFORNIA OR ARKANSAS, REFER TO THE FEDERAL SUPPLEMENTAL LABEL FOR AERIAL APPLICATIONS IN THAT STATE FOR SPECIFIC INSTRUCTIONS, RESTRICTIONS AND REQUIREMENTS.

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

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 downward. 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

14/45

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 Hooded Applicators

When applied under the conditions described in the following paragraphs for hooded applications, this product at recommended rates will control those weeds listed in the "ANNUAL WEEDS RATE TABLE" and "PERENNIAL WEEDS RATE TABLE" sections of this label. A hooded sprayer is a type of applicator where the spray pattern is fully enclosed including top, sides, front and back, thereby shielding the crop from the spray solution. Keep hoods 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.

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 of 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 35 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 3.5 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 CROPS (Alphabetical)

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

GENERAL USE INSTRUCTIONS:

16/45

Apply this product during fallow intervals preceding planting, prior to planting, at-planting, or preemergent to annual crops listed in this label, except where specifically limited. Unless otherwise specified, weed control applications may be made according to the rates listed in the "ANNUAL WEEDS, PERENNIAL WEEDS, AND WOODY BRUSH RATE TABLES" in this label. Repeat or single applications may be made up to a maximum of 6 quarts per acre per year unless otherwise specified below.

Note: The preplant, preemergent, and at-planting use instructions in this label section refer to applications made prior to both conventional and Roundup Ready® varieties of corn and soybeans.

GENERAL PRECAUTIONS, RESTRICTIONS:
Avoid contact of herbicide with foliage, green shoots or stems, bark, exposed roots (including those emerging from plastic mulch), 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. For any crop not listed in this label, applications, including post-harvest and fallow applications, must be made at least 12 months prior to planting, except that root and leafy vegetables may be planted 30 days after an application. See "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label for additional information.

8.1 Cereal and Grain Crops

LABELED CROPS: Barley, Oats, Rice, Rye, Wheat (all types).

TYPES OF APPLICATIONS: Preplant, Preemergence, At-Planting, and Post-harvest.

Preplant, Preemergence, At-Planting

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

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: 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: Preplant, Preemergence, At-Planting and Post-Harvest.

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

2,4-D Distinct™ Lariat®

Atrazine	Dual Magnum™	Lasso®/Alachlor
Axiom™	Dual II Magnum™	Linex™/Lorox™
Balance™	Epic™	Marksman™
Banvel™/Clarity™	Frontier™/Outlook™	Micro-Tech®
Bicep Magnum™	Fultime™	Prowl™
Bicep II Magnum™	Guardsman™/Leadoff™	Python™
Bullet®	Harness®	Simazine
Degree®	Harness XTRA	Topnotch™
Degree Xtra®	Harness XTRA 5.6L	

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 24 fluid ounces per acre in these tank mixtures. For other labeled annual weeds, apply 24 fluid ounces of this product per acre when weeds are less than 6 inches tall, and 24 to 36 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 from Route 50 South in Illinois and Indiana and the following states: Alabama, Arkansas, Delaware, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, New Jersey, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia and West Virginia.

Post-Harvest

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

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

8.3 Cotton

TYPES OF APPLICATIONS: Preplant, Preemergence, and At-Planting.
For Roundup Ready cotton, see the "Roundup Ready Crops" section of this label.

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.

8.4 Fallow Systems

LABELED CROPS: This product may be applied during the fallow period prior to planting or emergence of any crop on this label. For any crop not listed on this label, applications must be made at least 12 months prior to planting the next crop, except root and leafy vegetable crops, which may be planted if at least 30 days has passed since application.

TYPES OF APPLICATIONS: Chemical fallow, Preplant fallow beds, and 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 48 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: Do not apply dicamba tank mixtures by air in California.

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.

Preplant Fallow Beds

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

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 24 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: Preplant, Preemergence, At-Planting, and Post-Harvest.

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

Atrazine	Lariat
Bicep Ii Magnum	Lasso
Bullet	Micro-Tech
Dual II Magnum	

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 24 fluid ounces per acre in these tank mixtures. For other labeled annual weeds, apply 24 fluid ounces of this product per acre when weeds are less than 6 inches tall, and 24 to 36 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.

19/45

PRECAUTIONS, RESTRICTIONS: Do not apply more than a total of 2.5 quarts per acre prior to emergence of grain sorghum, including any fallow treatment.

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 24 fluid ounces of this product per acre for control.

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

8.6 Soybeans

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

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

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

PRECAUTIONS, RESTRICTIONS: Do not feed treated soybean forage or hay to livestock.

9.0 ROUNDUP READY CROPS

The following instructions or those separately published on Monsanto Supplemental labeling include all applications which can be made onto the specified Roundup Ready crops during the complete cropping season. Do NOT combine these instructions with other recommendations made for crop varieties that do not contain the Roundup Ready gene, in the "ANNUAL AND PERENNIAL CROPS (ALPHABETICAL)" section of this label.

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

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

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

NOTE: Roundup Ready seed, and the method of selectively controlling weeds in a Roundup Ready crop by applying glyphosate to the weeds and Roundup Ready crop are protected under several U.S. Patents, including 5,352,605 and 5,633,435. A license to use Roundup Ready seed must be obtained prior to use. Monsanto retains ownership of the gene and process technologies, and the Purchaser of the seed receives the right to use the licensed genes and technologies subject to the limited use license conditions. Seed containing the Roundup Ready trait cannot be used for research and demonstration, reverse engineering or in connection with herbicide registration. Progeny seed containing the Roundup Ready trait cannot be saved for replanting or transferred to others for replanting. Contact your Authorized Monsanto Retailer for information on obtaining a limited use license.

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

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

For proper stewardship of aerial applications over-the-top of Roundup Ready crops, Monsanto recommends that growers and applicators read and follow all precautions and procedures contained in the use guide "A Guide to On-Target Aerial Application" available by calling 1-800-ROUNDUP (1-800-768-6387) or on the internet at www.FARMSOURCE™.com.

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

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

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

Ammonium sulfate may be mixed with this product for applications to Roundup Ready crops. Refer to the "MIXING" section for use instructions for ammonium sulfate.

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

NOTE: The following recommendations are based on a clean start at planting by using a burndown application or tillage to control existing weeds before crop emergence. In no-till and stale seedbed systems, a

preplant burn-down treatment of this product is recommended to control existing weeds prior to crop emergence. Some weeds, such as black nightshade, broadleaf signalgrass, sicklepod, Texas panicum, sandbur, annual morningglory, woolly cupgrass, shattercane, wild proso millet, burcucumber, and giant ragweed with multiple germination times or suppressed (stunted) weeds may require a second application of this product for complete control. The second application should be made after some regrowth has occurred and at least 10 days after a previous application of this product.

9.1 Cotton with the Roundup Ready Gene

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

Maximum Allowable Combined Application Quantities Per Season	
Combined total per year for all applications	6 quarts per acre
Preplant, At-planting, Preemergence applications	4 quarts per acre
Total in-crop applications from ground cracking to layby	1.5 quarts per acre
Maximum preharvest application rate	1.5 quarts per acre

PRECAUTIONS, RESTRICTIONS: See the "ROUNDUP READY CROPS" section of this label for general precautionary instructions for use in Roundup Ready crops. The combined total application of this product from cotton emergence until harvest must not exceed 3.0 quarts per acre.

Preplant, Preemergence, At-Planting

USE INSTRUCTIONS: This product may be applied as a preplant, preemergence, or at-planting application to Roundup Ready Cotton.

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

Selective Equipment In-Crop

USE INSTRUCTIONS: This product may be applied using precision post-directed or hooded sprayers at rates up to 24 fluid ounces per acre per application to Roundup Ready cotton through layby.

Directed spray or hooded spray applications of this herbicide must utilize application equipment that will prevent contact of spray solution with the cotton plant. Applications must not be made to cotton less than 6 inches in height. Spray solution must not be allowed to contact cotton foliage or green stem tissue where cotton is less than 12 inches in height. Cotton plants which have achieved a height of 12 inches or more with sufficient bark development may receive a layby application directed at the base of cotton plants minimizing contact with green stem tissue or foliage.

PRECAUTIONS, RESTRICTIONS: No more than two applications should be made from the 5-leaf stage through layby. Sequential in-crop applications of this product must be at least 10 days apart and cotton must have at least two nodes of incremental growth between applications. 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.

Preharvest

USE INSTRUCTIONS: This product may be applied for preharvest annual and perennial weed control as a broadcast treatment to Roundup Ready cotton after 20 percent boll crack. Up to 48 fluid ounces of this product may be applied using either aerial or ground spray equipment. **NOTE:** This product will not enhance the performance of harvest aids when applied to Roundup Ready cotton

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

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

10.0 ANNUAL WEEDS RATE TABLE
(Alphabetically by Species)

WATER CARRIER VOLUMES OF 3 TO 10 GALLONS PER ACRE FOR GROUND APPLICATIONS AND 3 TO 5 GALLONS PER ACRE FOR AERIAL APPLICATIONS ARE RECOMMENDED.

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.

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 36 fluid ounces per acre where heavy weed densities exist.

ANNUAL WEEDS RATE TABLE

WEED SPECIES	RATE (fluid ounces per acre)		
	24	30	36
	Maximum height/length (in inches)		
Ammannia, purple	12	-	18
Annoda, spurred	3	5	8
Barley	18	-	-
Barnyardgrass	6	7	9
Bassia, fivehook	6	-	-
Beggarweed, Florida	8	-	-
Bittercress	20	-	-
Bluegrass, annual	10	-	-
Bluegrass, bulbous	6	-	-

Brome, downy	12	-	-
Brome, Japanese	24	-	-
Browntop panicum	12	-	24
Buckwheat, wild [2]	2	-	-
Burcucumber	12	-	18
Buttercup	20	-	-
Carolina geranium	4	-	9
Carpetweed	12	-	-
Cheat [1]	20	-	-
Chervil	20	-	-
Chickweed	18	-	-
Cocklebur	24	-	36
Copperleaf, hophornbeam	4	-	6
Copperleaf, Virginia	4	-	6
Coreopsis, plains	12	-	18
Corn, volunteer	20	-	-
Corn speedwell	12	-	-
Crabgrass	12	-	-
Crowfootgrass	6	-	12
Cutleaf evening primrose	3	-	6
Devilsclaw (unicorn plant)	6	-	-
Dwarfdandelion	12	-	-
Eastern mannagrass	12	-	-
Eclipta	8	12	-
Fall panicum	6	-	12
Falsedandelion	20	-	-
Falseflax, smallseed	12	-	-
Fiddleneck	12	-	

Field pennycress	12	-	-
Filaree	6	-	12
Fleabane, annual	20	-	-
Fleabane, hairy (*Conyza bonariensis)*	6	-	10
Fleabane, rough	12	-	-
Florida pusley	4	-	6
Foxtail, giant, bristly, yellow	20	-	-
Foxtail, Carolina	10	-	-
Foxtail, green	12	-	-
Goatgrass, jointed	12	-	-
Goosegrass	6	-	12
Grain sorghum (milo)	20	-	-
Groundcherry	6	-	9
Groundsel, common	10	-	-
Hemp sesbania	4	6	8
Henbit	6	-	12
Horseweed/ Marestail (*Conyza canadensis)*	12	-	18
Itchgrass	12	-	18
Jimsonweed	12	-	18
Johnsongrass, seedling	12	18	24
Junglerice	6	7	9
Knotweed	6	-	12
Kochia[3]	12	-	-
Lambsquarters	12	-	20
Little barley	12	-	-
London rocket	24	-	-
Mayweed	6	12	18

Morningglory, annual (*Ipomoea spp*)	3	-	6
Mustard, blue	18	-	-
Mustard, tansy	18	-	-
Mustard, tumble	18	-	-
Mustard, wild	18	-	-
Nightshade, black	6	-	12
Nightshade, hairy	6	-	12
Oats	18	-	-
Pigweed species	18	24	-
Prickly lettuce	12	-	-
Purslane	3	-	6
Ragweed, common	12	-	18
Ragweed, giant	12	-	18
Red rice	4	-	-
Rye, volunteer/cereal [1]	18 +	-	-
Ryegrass	6	-	12
Sandbur, field	12	-	- -
Sandbur, longspine	12	-	-
Shattercane	20	-	-
Shepherd's-purse	12	-	-
Sicklepod	4	-	8
Signalgrass, broadleaf	6	7	9
Smartweed, ladysthumb	6	-	9
Smartweed, Pennsylvania	6	-	9
Sowthistle, annual	6	-	12
Spanishneedles	6	-	12
Speedwell, purslane	12	-	-
Sprangletop	20	-	-

Spurge, prostrate	12	-	-
Spurge, spotted	12	-	-
Spurry, umbrella	6	-	-
Stinkgrass	12	-	-
Sunflower	18	-	-
Swinecress	12	-	-
Teaweed/ Prickly sida	4	-	6
Texas panicum	12	-	24
Thistle, Russian[4]	12	-	-
Velvetleaf	6	-	12
Virginia pepperweed	18	-	-
Waterhemp	6	-	12
Wheat[1]	18	-	-
Wheat, (overwintered)	12	-	18
Wild oats	18	-	-
Wild proso millet	12	-	18
Witchgrass	12	-	-
Woolly cupgrass	12	-	-
Yellow rocket	20	-	-

[1] Performance is better if application is made before this weed reaches the boot stage of growth.

[2] Use 24 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 24 fluid ounces followed by 24 fluid ounces of this product per acre.

[3] Do not treat kochia in the button stage.

[4]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.

10.1 Annual Weeds -- Rates for 10 to 40 Gallons per Acre

Apply 24 to 48 fluid ounces of this product per acre. Use 24 fluid ounces per acre if weeds are less than 6 inches tall, 36 fluid ounces per acre if weeds are 6 to 12 inches tall and 48 fluid ounces per acre if weeds are

greater than 12 inches tall. These rates will provide control of weeds listed in the annual weed control tables when water carrier volumes are 10 to 40 gallons per acre for ground applications. Older, mature (hardened) annual weed species may require higher rates even if they meet the size requirements.

10.2 Annual Weeds -- Tank Mixtures with 2,4-D or Dicamba

24 fluid ounces of this product plus 0.25 pound of dicamba or 0.5 pound of 2,4-D per acre will control the following weeds with the maximum height or length indicated: 6-inch -- prickly lettuce, marestail/horseweed, morning glory, kochia (dicamba only) 12-inch -- cocklebur, lambsquarters, pigweed, Russian thistle (2,4-D only).

24 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. Some crop injury may occur if dicamba is applied within 45 days of planting.

DO NOT APPLY DICAMBA TANK MIXTURES BY AIR IN CALIFORNIA.

10.3 Annual Weeds – Hand-Held or High-Volume Equipment

For control of weeds listed in the "ANNUAL WEEDS RATE TABLES", apply a 0.5 percent solution of this product to weeds 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 1.0 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 1.0 to 1.5 percent solution for annual and perennial weeds and a 5 to 8 percent solution for woody brush and trees.

10.4 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.

24 fluid ounces of this product plus 1 to 2 pounds of atrazine per acre will control the following weeds: Barnyardgrass, Downy brome, Green foxtail, Lambsquarters, Prickly lettuce, Tansy mustard, Pigweed, Field sandbur, Stinkgrass, Russian thistle, Volunteer wheat, Witchgrass and Kochia (add 0.13 pound of dicamba for control).

11.0 PERENNIAL WEEDS RATE TABLE
(Alphabetically by Species)

Apply to actively growing perennial weeds.

NOTE: If weeds have been mowed or tilled, do not treat until plants have resumed active growth and have reached the 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	0.75 – 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.			
Alligatorweed	3.0	3 - 20	1.25%
Partial control. Apply when most of the plants are in bloom. Repeat applications will be required to maintain control.			
Anise (fennel)	--	--	0.75 - 1.5%
Apply as a spray-to-wet treatment. Optimum results are obtained when plants are treated at the bud to full-bloom stage of growth.			
Bahiagrass	2.25 – 3.75	3 - 20	1.5%
Apply when most plants have reached the early head stage.			
Bentgrass	1.12	10 - 20	1.5%
For suppression in grass seed production areas. For ground applications only. Ensure entire crown area has resumed growth prior to a fall application. Bentgrass should have at least 3 inches of growth. Tillage prior to treatment should be avoided. Tillage 7 to 10 days after application is recommended for best results.			
Bermudagrass	2.25 – 3.75	3 - 20	1.5%
For control, apply 5 quarts of this product per acre. For partial control, apply 3 quarts per acre. Treat when Bermudagrass is actively growing and seedheads are present. Retreatment may be necessary to maintain control.			
Bermudagrass, water (knotgrass)	0.75 - 1.12	5 - 10	1.5%
Apply 36 fluid ounces of this product in 5 to 10 gallons of water per acre. Apply when water Bermudagrass is 12 to 18 inches in length. Allow 7 or more days before tilling, flushing or flooding the field. Fall applications only: Apply 24 fluid ounces of this product in 5 to 10 gallons of water per acre. Fallow fields should be tilled prior to application. Apply prior to frost on water Bermudagrass that is 12 to 18 inches in length. This product is not registered in California for use on water Bermudagrass.			

Bindweed, field	0.75 - 3.75	3 - 20	1.5%

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

For control, apply 3 to 3.75 quarts of this product per acre west of the Mississippi River and 2.25 to 3 quarts east of the Mississippi River. 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 48 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 24 to 48 fluid ounces of this product plus 1 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 24 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.

In California only, apply 0.75 to 3.75 quarts of this product per acre. Actual rate needed for suppression or control will vary within this range depending on local conditions. For suppression on irrigated land where annual tillage is performed, apply 24 fluid ounces of this product in 3 to 10 gallons of water per acre. Apply to bindweed that has reached a length of 12 inches or greater. Allow maximum weed emergence and runner growth. Allow 3 or more days after application before tillage.

Bluegrass, Kentucky	0.75 - 1.5	3 - 40	1.5%

Apply 48 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 24 to 36 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.

Blueweed, Texas	2.25 – 3.75	3 - 40	1.5%

Apply 3 to 3.75 quarts of this product per acre west of the Mississippi River and 2.25 to 3 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.

Brackenfern	2.25 - 3	3 - 40	0.75 - 1.25%

Apply to fully expanded fronds that are at least 18 inches long.

Bromegrass, smooth	0.75 - 1.5	3 - 40	1.5%

Apply 48 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 24 to 36 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.

Bursage, woolly-leaf	--	3 - 20	1.5%

For control, apply 48 fluid ounces of this product plus 0.5 pound of dicamba per acre. For partial control, apply 24 fluid ounces of this product plus 0.5 pound of dicamba per acre. Apply when plants are producing new active growth which has been initiated by moisture for at least 2 weeks and when plants are at or beyond flowering.

Canarygrass, reed	1.5 - 2.25	3 - 40	1.5%

For best results, apply when most plants have reached the boot-to-head stage of growth.

Cattail	2.25 – 3.75	3 - 40	1.5%

Apply when most plants have reached the early head stage.

Clover; red or white	2.25 – 3.75	3 - 20	1.5%

Apply when most plants have reached the early bud stage.

Also for control, apply 24 fluid ounces of this product plus 0.5 to 1 pound of 2,4-D in 3 to 10 gallons of water per acre.

Cogongrass	2.25 – 3.75	10 - 40	1.5%

Apply when cogongrass is at least 18 inches tall in late summer or fall. Due to uneven stages of growth and the dense nature of vegetation preventing good spray coverage, repeat treatments may be necessary to maintain control.

Dallisgrass	2.25 – 3.75	3 - 20	1.5%

Apply when most plants have reached the early head stage.

Dandelion	2.25 – 3.75	3 - 40	1.5%

Apply when most plants have reached the early bud stage of growth.

Also for control, apply 24 fluid ounces of this product plus 0.5 pound of 2,4-D in 3 to 10 gallons of water per acre.

Dock, curly	2.25 – 3.75	3 - 40	1.5%

Apply when most plants have reached the early bud stage of growth.

Also for control, apply 24 fluid ounces of this product plus 0.5 to 1 pound of 2,4-D in 3 to 10 gallons of water per acre.

Dogbane, hemp	3.0	3 - 40	1.5%

Apply when most plants have reached the late bud to flower stage of growth. Following crop harvest or mowing, allow weeds to regrow to a mature stage prior to treatment. For best results, apply in late summer or fall.
For suppression, apply 24 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. Delay applications until maximum emergence of dogbane has occurred.

Fescue (except tall)	**2.25 – 3.75**	**3 - 20**	**1.5%**

Apply when most plants have reached the early head stage.

Fescue, tall	**0.75 - 2.25**	**3 - 40**	**1.5%**

Apply 2.25 quarts of this product per acre when most plants have reached boot-to-early seedhead stage of development.

Fall applications only: Apply 24 fluid ounces of this product in 3 to 10 gallons of water per acre. Apply to fescue in the fall when plants have 6 to 12 inches of new growth. A sequential application of 24 fluid ounces per acre of this product will improve long-term control and control seedlings germinating after fall treatments or the following spring.

Guineagrass	**1.5 - 2.25**	**3 - 40**	**0.75%**

Apply when most plants have reached at least the 7-leaf stage of growth. Ensure thorough coverage when using hand-held equipment. In Texas and ridge of Florida, use 48 fluid ounces for control. In the flatwoods region of Florida, 2.25 quarts is required for control.

Horsenettle	**2.25 – 3.75**	**3 - 20**	**1.5%**

Apply when most plants have reached the early bud stage.

Horseradish	**3.0**	**3 - 40**	**1.5%**

Apply when most plants have reached the late bud to flower stage of growth. For best results, apply in late summer or fall.

Iceplant	**--**	**--**	**1.25 - 1.5%**

Iceplant should be at or beyond the early bud stage of growth. Thorough coverage is necessary for best control.

Jerusalem artichoke	**2.25 – 3.75**	**3 - 20**	**1.5%**

Apply when most plants are in the early bud stage.

Johnsongrass	**0.75 - 2.25**	**3 - 40**	**0.75%**

In annual cropping systems apply 24 to 48 fluid ounces of this product per acre. Apply 24 fluid ounces of this product in 3 to 10 gallons of water per acre. Use 48 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 1.5 to 2.25 quarts 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 24 fluid ounces of this product per acre.

For burndown of Johnsongrass, apply 24 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 0.75 percent solution of this product when Johnsongrass is 12 to 18 inches in height. Coverage should be uniform and complete.

Kikuyugrass	1.5 - 2.25	3 - 40	1.5%

Spray when most kikuyugrass is at least 8 inches in height (3- or 4-leaf stage of growth). Allow 3 or more days after application before tillage.

Knapweed	3.0	3 - 40	1.5%

Apply when most plants have reached the late bud to flower stage of growth. For best results, apply in late summer or fall.

Lantana	--	--	0.75 – 1.0%

Apply at or beyond the bloom stage of growth. Use the higher application rate for plants that have reached the woody stage of growth.

Lespedeza	2.25 – 3.75	3 - 20	1.5%

Apply when most plants have reached the early bud stage.

Milkweed, common	2.25	3 - 40	1.5%

Apply when most plants have reached the late bud to flower stage of growth.

Muhly, wirestem	0.75 - 1.5	3 - 40	1.5%

Use 24 fluid ounces of this product in 3 to 10 gallons of water per acre. Use 48 fluid ounces of this product when applying 10 to 40 gallons of water per acre or in pasture, sod, or non-crop areas. Spray when the wirestem muhly is 8 inches or more in height. Do not till between harvest and fall applications or in the fall or spring prior to spring applications. Allow 3 or more days after application before tillage.

Mullein, common	2.25 – 3.75	3 - 20	1.5%

Apply when most plants are in the early bud stage.

Napiergrass	2.25 – 3.75	3 - 20	1.5%

Apply when most plants are in the early head stage.

Nightshade, silverleaf	1.5	3 - 10	1.5%

Applications should be made when at least 60 percent of the plants have berries. Fall treatments must be applied before a killing frost.

Nutsedge, purple or yellow	0.75 - 2.25	3 - 40	0.75 - 1.5%

Apply 2.25 quarts of this product per acre or apply a 1 to 2 percent solution for control of nutsedge plants and immature nutlets attached to treated plants. Treat when plants are in flower or when new nutlets can be found at rhizome tips. Nutlets that have not germinated will not be controlled and may germinate following treatment. Repeat treatments will be required for long-term control of ungerminated tubers.

Sequential applications: 24 to 48 fluid ounces of this product in 3 to 10 gallons of water per acre will also provide control. Make applications when a majority of the plants are in the 3- to 5-leaf stage (less than 6 inches tall). Repeat this application, as necessary, when newly emerging plants reach the 3- to 5-leaf stage. Subsequent applications will be necessary for long-term control.

For partial control of existing plants, apply 0.75 to 1.5 quarts of this product in 3 to 40 gallons of water per acre. Treat when plants have 3 to 5 leaves and most are less than 6 inches tall. Repeat treatments will be required to control subsequent emerging plants or regrowth of existing plants.

Orchardgrass	**0.75 - 1.5**	**3 - 40**	**1.5%**

Apply 48 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 24 to 36 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.

Orchardgrass sods going to no-till corn: Apply 0.75 to 1.12 quarts of this product in 3 to 10 gallons of water per acre. Apply to orchardgrass that is a minimum of 12 inches tall for spring applications and 6 inches tall for fall applications. Allow at least 3 days following application before planting. A sequential application of atrazine will be necessary for optimum results.

Pampasgrass	**--**	**--**	**0.75 - 1.5%**

Pampasgrass should be at or beyond the boot stage of growth. Thorough coverage is necessary for best control.

Paragrass	**2.25 – 3.75**	**3 - 20**	**1.5%**

Apply when most plants are in the early head stage.

Phragmites	**2.25 – 3.75**	**10 - 40**	**0.75 - 1.5%**

For partial control and for best results, treat during late summer or fall when plants are actively growing and in full bloom. Treatment before or after this stage may lead to reduced control. Due to the dense nature of the vegetation, which may prevent good spray coverage or uneven stages of growth, repeat treatments may be necessary to maintain control. Visual control symptoms will be slow to develop.

Poison hemlock	**--**	**--**	**0.75 - 1.5%**

Apply as a spray-to-wet treatment. Optimum results are obtained when plants are treated at the bud to full-bloom stage of growth.

Pokeweed, common	**0.75**	**3 - 40**	**1.5%**

Apply to actively growing plants up to 24 inches tall.

Quackgrass	**0.75 - 2.25**	**3 - 40**	**1.5%**

In annual cropping systems, or in pastures and sods followed by deep tillage: Apply 24 fluid ounces of this product in 3 to 10 gallons of water per acre. For 10 to 40 gallons of water per acre, apply 2 quarts of this product. Do not tank mix with residual herbicides when using the 0.75-quart 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 1.5 to 2.25 quarts of this product in 10 to 40 gallons of water per acre when the quackgrass is greater than 8 inches tall.

Redvine	**0.75 - 1.5**	**5 - 10**	**1.5%**

For suppression, apply 24 fluid ounces of this product per acre at each of two applications 7 to 14 days apart or a single application of 48 fluid ounces per acre. Apply recommended rates in 5 to 10 gallons of water per acre. Apply in late September or early October to plants that are at least 18 inches tall and have been growing 45 to 60 days since the last tillage operation. Make applications at least 1 week before a killing frost.

Reed, giant	**--**	**--**	**1.5%**

Best results are obtained when applications are made in late summer to fall.

Ryegrass, perennial	**0.75 - 2.25**	**3 - 40**	**0.75%**

In annual cropping systems apply 24 to 48 fluid ounces of this product per acre. Apply 24 fluid ounces of this product in 3 to 10 gallons of water per acre. Use 48 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 1.5 to 2.25 quarts 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 24 fluid ounces of this product per acre.

Smartweed, swamp	**2.25 – 3.75**	**3 - 40**	**1.5%**

Apply when most plants have reached the early bud stage of growth. Also for control, apply 24 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.

Sowthistle, perennial	**1.5 - 2.25**	**3 - 40**	**1.5%**

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

Spurge, leafy	**--**	**3 - 10**	**1.5%**

For suppression, apply 24 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.

Starthistle, yellow	**1.5**	**10 - 40**	**1.5%**

Best results are obtained when applications are made during the rosette, bolting and early flower stages.

Sweet potato, wild	**--**	**--**	**1.5%**

For partial control, apply to plants that are at or beyond the bloom stage of growth. Repeat applications may be required.

Thistle, artichoke	--	--	**1.5%**

For partial control, apply to plants that are at or beyond the bloom stage of growth. Repeat applications may be required.

Thistle, Canada	**1.5 - 2.25**	**3 - 40**	**1.5%**

Apply when most plants are at or beyond the bud stage of growth. After harvest, mowing or tillage in the late summer or fall, allow at least 4 weeks for initiation of active growth and rosette development prior to 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 24 fluid ounces of this product, or 24 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.

Timothy	**1.5 - 2.25**	**3 - 40**	**1.5%**

For best results, apply when most plants have reached the boot-to-head stage of growth.

Torpedograss	**3 - 3.75**	**3 - 40**	**1.5%**

For partial control, apply when most plants are at or beyond the seedhead stage of growth. Repeat applications will be required to maintain control. Fall treatments must be applied before frost.

Trumpetcreeper	**1.5**	**5 - 10**	**1.5%**

For partial control, apply in late September or October, to plants that are at least 18 inches tall and have been growing 45 to 60 days since the last tillage operation. Make applications at least 1 week before a killing frost.

Vaseygrass	**2.25 – 3.75**	**3 - 20**	**1.5%**

Apply when most plants are in the early head stage.

Velvetgrass	**2.25 – 3.75**	**3 - 20**	**1.5%**

Apply when most plants are in the early head stage.

Wheatgrass, western	**1.5 - 2.25**	**3 - 40**	**1.5%**

For best results, apply when most plants have reached the boot-to-head stage of growth.

12.0 WOODY BRUSH AND TREES RATE TABLE

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

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

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

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

Weed Species	**Rate (QT/A)**	**Hand-Held % Solution**
Alder	2.25-3	0.75 - 1.5%
Ash *	1.5-3.75	0.75 - 1.5%
Aspen, quaking	1.5-2.25	0.75 - 1.5%
Bearmat (Bearclover) *	1.5-3.75	0.75 - 1.5%
Beech *	1.5-3.75	0.75 - 1.5%
Birch	1.5-2.25	0.75 - 1.5%
Blackberry	2.25-3	0.75 - 1.5%
Make applications after plants have reached full leaf maturity. Best results are obtained when applications are made in late summer or fall. Applications may also be made after leaf drop and until a killing frost or as long as stems are green. After berries have set or dropped in late fall, blackberry can be controlled by applying a 1.0 percent solution of this product. For control of blackberries after leaf drop and until killing frost or as long as stems are green, apply **2.25 to 3** quarts of this product in 10 to 40 gallons of water per acre.		
Blackgum	1.5 - 3.75	0.75 - 1.5%
Bracken	1.5 - 3.75	0.75 - 1.5%
Broom; French, Scotch	--	1.25-1.5%
Buckwheat, California *	--	0.75 - 1.5%
Thorough coverage of foliage is necessary for best results.		
Cascara *	1.5 - 3.75	0.75 - 1.5%
Catsclaw *	--	0.75 - 1.5%
Ceanothus *	1.5 - 3.75	0.75 - 1.5%
Chamise	--	0.75%

Thorough coverage of foliage is necessary for best results.

Cherry; bitter, black, pin	1.5 - 2.25	0.75 - 1.5%
Coyote brush	--	0.75 - 1.5%

Apply when at least 50 percent of the new leaves are fully developed.

Dogwood *	1.5 - 3.75	0.75 - 1.5%
Elderberry	1.5 - 2.25	0.75 - 1.5%
Elm *	1.5 - 3.75	0.75 - 1.5%
Eucalyptus	--	1.5%

For control of eucalyptus resprouts, apply when resprouts are 6 to 12 feet tall. Ensure complete coverage. Avoid application to drought-stressed plants.

Florida holly (Brazilian Peppertree) *	1.5 - 3.75	0.75 - 1.5%
Gorse *	1.5 - 3.75	0.75 - 1.5%
Hasardia *	--	0.75 - 1.5%

Thorough coverage of foliage is necessary for best results.

Hawthorn	1.5 - 2.25	0.75 - 1.5%
Hazel	1.5 - 2.25	0.75 - 1.5%
Hickory *	1.5 - 3.75	0.75 - 1.5%
Honeysuckle	2.25 - 3	0.75 - 1.5%
Hornbeam, American *	1.5 - 3.75	0.75 - 1.5%
Kudzu	3 - 3.75	1.5%

Repeat applications may be required to maintain control.

Locust, black *	1.5 - 3	0.75 - 1.5%
Madrone resprouts *	--	1.5%

Apply to resprouts that are 3 to 6 feet tall. Best results are obtained with spring/early summer treatments.

Manzanita *	1.5 - 3.75	0.75 - 1.5%
Maple, red	1.5 - 3	0.75 - 1.5%

Apply a0.75 to 1.25 percent solution when at least 50 percent of the new leaves are fully developed. For partial control, apply 1.5 to 3 quarts of this product per acre.

Maple, sugar	--	0.75 - 1.5%

Apply when at least 50 percent of the new leaves are fully developed.

Monkey flower *	--	0.75 - 1.5%

Thorough coverage of foliage is necessary for best results.

Oak; black,white *	1.5 - 3	0.75 - 1.5%
Oak, post	2.25 - 3	0.75 - 1.5%
Oak; northern,	--	0.75 - 1.5%

Apply when at least 50 percent of the new pin leaves are fully developed

Oak; southern red	1.5 - 2.25	0.75 - 1.5%
Persimmon *	1.5 - 3.75	0.75 - 1.5%
Pine	1.5 - 3.75	0.75 - 1.5%
Poison ivy/ Poison oak	3 - 3.75	1.5%

Repeat applications may be required to maintain control. Fall treatments must be applied before leaves lose green color.

Poplar, yellow *	1.5 - 3.75	0.75 - 1.5%
Redbud,eastern	1.5 - 3.75	0.75 - 1.5%
Rose, multiflora	1.5	0.75%

Treatments should be made prior to leaf deterioration by leaf-eating insects.

Russian olive *	1.5 - 3.75	0.75 - 1.5%
Sage, black	--	0.75%

Thorough coverage of foliage is necessary for best results.

Sage, white *	1.5 - 3.75	0.75 - 1.5%
Sage brush, California	--	0.75%

Thorough coverage of foliage is necessary for best results.

Salmonberry	1.5 - 2.25	0.75 - 1.5%

Salt-cedar	1.5 - 3.75	0.75 - 1.5%
Sassafras *	1.5 - 3.75	0.75 - 1.5%
Sourwood *	1.5 - 3.75	0.75 - 1.5%
Sumac; poison, smooth, winged *	1.5 – 3.0	0.75 - 1.5%
Sweetgum	1.5 - 2.25	0.75 - 1.5%
Swordfern *	1.5 - 3.75	0.75 - 1.5%
Tallowtree, Chinese	--	0.75%
Thorough coverage of foliage is necessary for best results		
Tan oak resprouts *	--	1.5%
Apply to resprouts that are less than 3 to 6 feet tall. Best results are obtained with fall applications.		
Thimbleberry	1.5 - 2.25	0.75 - 1.5%
Tobacco, tree *	--	0.75 - 1.5%
Trumpetcreeper	1.5 - 2.25	0.75 - 1.5%
Vine maple *	1.5 - 3.75	0.75 - 1.5%
Virginia creeper	1.5 - 3.75	0.75 - 1.5%
Waxmyrtle, southern *	1.5 - 3.75	0.75 - 1.5%
Willow	2.25 - 3	0.75 - 1.5%

* Partial control.

13.0 LIMIT OF WARRANTY AND LIABILITY

This 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.

Upon opening and using this product, buyer and all users are deemed to have accepted the terms of this LIMIT OF WARRANTY AND LIABILITY which may not be varied by any verbal or written agreement. If terms are not acceptable, return at once unopened.

Amplify, Bullet, Degree, Degree XTRA, Harness, Harness XTRA, Lariat, Lasso, Micro-Tech, Monsanto and Vine symbol, and Permit are trademarks of Monsanto Technology LLC.

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Valor is a trademark of Valent USA Corporation

U.S. Patents pending. No license granted under any non-U.S. patent(s).

EPA Reg. No. 524-XXX

In case of an emergency involving this product,
Call Collect, day or night, (314) 694-4000.

II. SUPPLEMENTAL LABELING FOR FOOD CROP USES

Table of Contents: Crop Supplemental labeling

* Approvals of these supplemental labels for MON 78404 Herbicide (524-540)

SUPPLEMENTAL LABELING

READ THE ENTIRE LABEL FOR **[INSERT BRAND NAME]** BEFORE PROCEEDING WITH THE USE DIRECTIONS CONTAINED IN THIS SUPPLEMENTAL LABELING.

When using **[INSERT BRAND NAME]** as permitted according to this supplemental labeling, read and follow all applicable directions, restrictions, and precautions on the label booklet provided with the pesticide container and on this supplemental labeling. This supplemental labeling must be in the possession of the user at the time of pesticide application.

[INSERT BRAND NAME HERE]
Herbicide

EPA Reg. No. 524-xxx

Keep out of reach of children.

DANGER! PELIGRO!

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

In case of an emergency involving this product, Call Collect, day or night, 314-694-4000.

[INSERT BRAND NAME] is a registered trademark of Monsanto Technology LLC.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in any manner inconsistent with its labeling.

This labeling must be in the possession of the user at the time of herbicide application.

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.

See "GENERAL INFORMATION" and "MIXING" sections of the label booklet for **[INSERT BRAND NAME]** for essential product performance information.

[INSERT SPECIFIC DIRECTIONS FOR USE HERE]

Read the "Limit of Warranty and Liability" in the label booklet for [INSERT BRAND NAME] before using. These terms apply to this supplemental labeling and if these terms are not acceptable, return the product unopened at once.

A. FOR AERIAL APPLICATION IN CALIFORNIA ONLY

Aerial applications of this product are allowed in fallow, preplant and reduced tillage systems prior to the emergence of labeled crops and in preharvest treatments to Roundup Ready cotton..

Do not plant subsequent crops other than those listed in the label booklet for 12 months following application, except that root or leafy vegetables may be planted a minimum of 30 days following application.

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

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

DO NOT EXCEED A MAXIMUM RATE OF 48 FLUID OUNCES PER ACRE OF THIS PRODUCT WHEN MAKING THE LABELED AERIAL APPLICATIONS.

Aerial Equipment
Use the recommended rates of this product in 3 to 15 gallons of water per acre. Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment wash waters.

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

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

1. Do not apply within 100 feet of all desirable vegetation or crop(s).

2. If wind up to 5 miles per hour is blowing toward desirable vegetation or crop(s), do not apply within 500 feet of the desirable vegetation or crop(s).

3. Winds blowing from 5 to 10 miles per hour toward desirable vegetation or crop(s) may require buffer zones in excess of 500 feet.

4. Do not apply when winds are in excess of 10 miles per hour or when inversion conditions exist.

Coarse sprays are less likely to drift; therefore, do not use nozzles or nozzle configurations that dispense spray as fine spray droplets. Do not angle nozzles forward into the air-stream and do not increase spray volume by increasing nozzle pressure. Drift control additives may be used. When a drift control additive is used, read and carefully observe the cautionary statements and all other information appearing on the additive label.

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

B. FOR AERIAL APPLICATION IN FRESNO COUNTY, CALIFORNIA ONLY (From February 15 through March 31 Only)

Applicable Area

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

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

General Information

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

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

Written Recommendations

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

Aerial Applicator Training and Equipment

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

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

To report known or suspected misuse of this product, call 1-800-332-3111.

For additional information on the proper aerial application of this product, call 916-784-1718.

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

C. FOR AERIAL APPLICATION IN ARKANSAS ONLY

USE DIRECTIONS

AVOID DRIFT. DO NOT APPLY INTO STILL AIR WHERE THERE IS A TEMPERATURE INVERSION LAYER LOW ENOUGH FOR FINE SPRAY PARTICLES TO BECOME SUSPENDED AND MOVE OUTSIDE THE TARGET AREA WHEN THE INVERSION LAYER MOVES. DO NOT APPLY WHEN

WINDS ARE GUSTY OR UNDER ANY OTHER CONDITION THAT FAVORS DRIFT. DRIFT IS LIKELY TO CAUSE DAMAGE TO ANY VEGETATION CONTACTED. TO PREVENT INJURY TO ADJACENT DESIRABLE VEGETATION, APPROPRIATE BUFFER ZONES MUST BE MAINTAINED.

Use the recommended rate of this product in 3 to 15 gallons of water per acre.

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

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

The distance of the outermost nozzles on the boom must not exceed 75 percent of the length of the wingspan or rotor. In many cases, reducing this distance to 65 percent of the length of the wingspan or rotor will improve drift control without affecting the swath width.

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

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

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

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