PROTOCOL®
Herbicide

## Complete Directions for Use

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

®Protocol is a registered trademark of Monsanto Company.

EPA Reg. No. 524-326

Read each of these sections of this label for essential product performance information.

USE THESE CONVENIENT SECTION MARKERS.

GENERAL INFORMATION

MIXING, ADDITIVES AND APPLICATION INSTRUCTIONS

WEEDS CONTROLLED

NONCROP USES

CROPPING SYSTEMS

MINIMUM TILLAGE

TREE AND VINE CROPS

ACCEPTED

JUN 28 1995

Under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, for the pesticide registered under EPA Reg. No. 524-32(,

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Read the entire label before using this product.

Use only according to label instructions.

Read ''LIMIT OF WARRANTY AND LIABILITY'' before buying or using. If terms are not acceptable, return at once unopened.

REFORMULATION IS PROHIBITED. SEE INDIVIDUAL CONTAINER LABEL FOR REPACKAGING LIMITATIONS.

### 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.

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.

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.

PRECAUTIONARY STATEMENTS	
Hazards to Humans and Domestic Animals	· · · · · · · · · · · · · · · · · · ·
Keep out of reach of children.	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
CAUTION!	••••
MAY-CAUSE EYE IRRITATION.	
HARMFUL IF INHALED.	, ; ; ; ;
Avoid breathing vapors or spray mist.	· · · · · · · · · · · · · · · · · · ·

Avoid contact with eyes, skin or clothing.

FIRST AID: IF IN EYES, immediately flush with plenty of water for at least 15 minutes. Get medical attention.

FIRST AID: IF INHALED, remove individual to fresh air. Seek medical attention if breathing difficulty develops.

IF ON SKIN, immediately flush with plenty of water.

## Personal Protective Equipment:

Applicators and other handlers must wear long-sleeved shirt and long pants, shoes plus socks. Follow manufacturer's instruction for cleaning/maintaining PPE. 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 the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240 (d) (4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

User safety recommendation:

Users should:

 Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.

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

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.

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 USING 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 Lorch, it ignited cigarette or other ignition source.

ACTIVE INGREDIENT:

*Glyphosate, N-(phosphonomethyl) glycine.	
in the form of its isopropylamine salt	41.5%
INERT INGREDIENTS:	58.5%
	100.0%

\* Contains 480 grams per litre or 4 pounds per U.S. gallon of the active ingredient glyphosate in the form of its isopropylamine salt. Equivalent to 356 grams per litre or 3 pounds per U.S. gallon of the acid, glyphosate.

## DIRECTIONS FOR USE

It is a violation of Federal law to use this product in any manner inconsistent with its labeling. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulations.

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 areas during application.

# 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, are: coveralls, waterproof gloves, and shoes plus socks.

# 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 too prevent transfer of this product onto desirable vegetation.

for more product information, call toll-free 1-800-332-3111.

Storage and Disposal

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

#### STORAGE:

STORE ABOVE 10° F (-12°C) TO KEEP PRODUCT FROM CRYSTALLIZING.

Crystals will settle to the bottom. If allowed to crystallize, place in a warm room 68°F (20°C) for several days to redissolve and shake or roll to mix well before using.

#### DISPOSAL:

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

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

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.

### GENERAL INFORMATION

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

This product, a water soluble liquid, mixes readily with water to be applied as a foliar spray for the control or destruction of most herbaceous plants. It may be applied through most standard industrial or field-type sprayers after dilution and thorough mixing with water in accordance with label instructions.

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

Unless otherwise specified on this label, delay application until vegetation has emerged and reached the stages described for control of such vegetation under the "WEEDS CONTROLLED" section of this label. Unemerged plants arising from unattached underground rhizomes or root stocks of perennials will not be affected by the herbicide and will continue to grow. For this reason, best control of most perennial weeds is obtained when treatment is made at late growth stages approaching maturity.

Always use the higher rate of this product per acre within the recommended range when (1) weed growth is heavy or dense, or (2) weeds are growing in an undisturbed (noncultivated) area.

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

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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.

Rainfall or irrigation occurring within 6 hours after application may reduce effectiveness. Heavy rainfall or irrigation within 2 hours after application may wash the chemical off the foliage and a repeat treatment may be required.

This product does not provide residual weed control. For subsequent residual weed control, follow a label-approved herbicide program. Read and carefully observe the cautionary statements and all other information appearing on the labels of all herbicides used.

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

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

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.

#### ATTENTION

AVOID DRIFT. EXTREME CARE MUST BE USED WHEN APPLYING THIS PRODUCT TO PREVENT INJURY TO DESIRABLE PLANTS AND CROPS.

Do not allow the herbicide solution to mist, drip, drift, or splash onto desirable vegetation, since minute quantities of this product can cause severe damage or destruction to the crop, plants, or other areas on which treatment was not intended. The likelihood of injury occurring from the use of this product is greatest when winds are gusty or in excess of 5 mph or when other conditions, including lesser wind velocities, will allow spray drift to occur. When spraying, avoid combinations of pressure and nozzle type that will result in splatter or fine particles (mist) which are likely to drift. AVOID APPLYING AT EXCESSIVE SPEED OR PRESSURE.

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

# MIXING, ADDITIVES AND APPLICATION INSTRUCTIONS

APPLY THESE SPRAY SOLUTIONS IN PROPERLY MAINTAINED AND CALIBRATED EQUIPMENT CAPABLE OF DELIVERING DESIRED VOLUMES. DO NOT APPLY WHEN WIND OR OTHER CONDITIONS FAVOR DRIFT. HAND-GUN APPLICATIONS SHOULD BE PROPERLY DIRECTED TO AVOID SPRAYING DESTRABLE PLANTS. NOTE: REDUCED RESULTS MAY OCCUR IF, PATER CONTAINING SOIL IS USED, SUCH AS WATER FROM PONDS AND UNLINED DITCHES,...

### MIXING

This product requires use with a nonionic surfactant. When using this product, mix 4 to 8 quarts (1 to 2 percent solution) of a nonionic surfactant

per 100 gallons of spray solution. Use the 8-quart rate for any surfactant containing less than 50 percent active ingredient. Read and carefully observe surfactant cautionary statements and other information appearing on the surfactant label.

Distributor supplemental labels will have one of the following paragraphs:

- Wilbur-Ellis recommends the use of at least an 80 percent active ingredient surfactant such as R-110 or similar type agricultural surfactant.
- However, whenever a nonionic surfactant is required, it is recommended that Activate Plus be used.
- It is recommended that Classe Spray Booster's, a nonionic surfactant, be used whenever a nonionic surfactant is specified.
- Wherever a nonionic surfactant is specified on this label, we recommend Loveland LI700, Loveland Activator 90, or other premium quality 80 percent active (minimum) nonionic surfactant approved for use on growing crops.
- It is recommended that an 80 percent active nonionic, low foam spray adjuvant such as INDUCE<sup>TM</sup> be used.
- Always be sure to use a high quality nonionic surfactant like Cornbelt® Premier 90® or Cornbelt® Spray Activator 85.

R-11© is a registered trademark of Wilbur-Ellis Co.
Class© is a registered trademark of Cenex/Land O' Lakes Agronomy Co.
Loveland© is a registered trademark of Loveland Industries
Induce<sup>TM</sup> is a trademark of Helena Chemical Co.
Cornbelt© and Premier 90© are registered trademarks of Van Diest Supply Co.

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 (see ''DIRECTIONS FOR USE'' and ''WEEDS CONTROLLED'' sections of this label) and nonionic surfactant near the end of the filling process and mix well. Remove hose from tank immediately after filling to avoid siphoning back into the carrier source. During mixing and application, foaming of the spray solution may occur. To prevent or minimize foam, avoid the use of mechanical agitators, terminate by-pass and return lines at the bottom of the tank and, if needed, use an approved antifoam or defoaming agent.

# TANK MIXTURES

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

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

- 1. Place a 20 to 35 mesh screen or wetting basket over fill. Ang. port. .
- Through the screen, fill the spray tank one-half full, with water and start agitation.
- 3. If a wettable powder is used, make a slurry with the weiter carrier, and add it SLOWLY through the screen into the tank. Continue agitation,

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- 4. If a flowable formulation is used, premix one part flowable with one part water. Add diluted mixture SLOWLY through the screen into the tank. Continue agitation.
- 5. If an emulsifiable concentrate formulation is used, premix one part emulsifiable concentrate with two parts water. Add diluted mixture SLOWLY through the screen into the tank. Continue agitation.
- 6. Continue filling the spray tank with water and add the required amount of this product near the end of the filling process.
- 7. Add nonionic surfactant to the spray tank before completing the filling process.
- 8. Add individual formulations to the spray tank as follows: wettable powder, flowable, emulsifiable concentrate, drift control additive, water soluble liquid followed by surfactant.

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

Keep by-pass line on or near bottom of tank to minimize foaming. Screen size in nozzle or line strainers should be no finer than 50 mesh. Carefully select proper nozzle to avoid spraying a fine mist. For best results with conventional ground application equipment, use flat fan nozzles.

CLEAN SPRAYER AND PARTS IMMEDIATELY AFTER USING THIS PRODUCT BY THOROUGHLY FLUSHING WITH WATER AND DISPOSE OF RINSATE ACCORDING TO LABELED USE OR DISPOSAL INSTRUCTIONS.

### ADDITIVES

### 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 and this product plus 2,4-D, Banvel<sup>TM</sup> or residual herbicide tank mixtures on annual and perennial weeds. The improvement in performance may be apparent where environmental stress is a concern. Low-quality ammonium sulfate may contain material that will not readily dissolve, which could result in nozzle tip plugging. To determine quality, perform a jar test by adding 1/3 cup of ammonium sulfate to 1 gallon of water and agitate for 1 minute. If undissolved sediment is observed, predissolve the ammonium sulfate in water and filter prior to addition to the spray tank. If ammonium sulfate is added directly to the spray tank, add slowly with agitation. Adding too quickly may clog outlet lines. Ensure that ammonium sulfate is completely dissolved in the spray tank before adding herbicides or surfactant. Theroughly rinse the spray system with clean water after use to reduce corrosion.

NOTE: The use of ammonium sulfate as an additive does not preclude the need for surfactant. Do not use herbicide rates lower than recommended in this label.

### COLORANTS OR DYES

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

# APPLICATION EQUIPMENT AND TECHNIQUES

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

This product may be applied with the following application equipment:

Aerial - Fixed Wing and helicopter

### Broadcast Spray

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

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

\* This product is not registered in California or Arizona for use in mistblowers.

Selective Equipment — Recirculating sprayers, shielded sprayers and wiper applicators.

See the appropriate part of this section for specific instructions and rates of application.

### E AFRIAL EQUIPMENT E

Use the recommended rates of this product in 3 to 15 gallons of water per acre unless otherwise specified on this label. See the ''WEEDS CONTROLLED'' section of this label for specific rates. Unless otherwise specified, do not exceed 1 quart per acre. Aerial applications of this product may be made in annual cropping conventional tillage systems, fallow and reduced tillage systems and preharvest, silvicultural sites, and rights of wayapplications. Refer to the individual use area sections of this label for recommended volumes and application rates. FOR AERIAL APPLICATION IN CALIFORNIA, REFER TO THE FEDERAL SUPPLEMENTAL LABEL FOR SPECIFIC INSTRUCTIONS, RESTRICTIONS AND REQUIREMENTS.

Avoid direct application to any body of water.

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

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

Drift control additives may be used. When a drift control additive is used, read and carefully observe the cautionary statements and all other information appearing on the additive label.

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

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

This product plus Oust™, Banvel or 2,4-D tank mixtures may not be applied by air in California.

### M BROADCAST EQUIPMENT

•For control of annual or perennial weeds listed on this label using 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 on this label. See the ''WEEDS CONTROLLED'' section of this label for specific rates. As density of weeds increases, spray volume should be increased within the recommended range to ensure complete coverage. Carefully select proper nozzle to avoid spraying a fine mist. For best results with ground application equipment, use flat fan nozzles. Check for even distribution of spray droplets.

# CONTROLLED DROPLET

### ■ APPLICATION (CDA) ■

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

For the control of labeled annual weeds with hand-held CDA units, apply a 20 percent solution of this product plus a 5 percent solution of nonionic surfactant at a flow rate of 2 fluid ounces per minute and a walking speed of 1.5 mph (1 quart per acre). For the control of labeled perennial weeds, apply a 20 to 40 percent solution of this product plus a 5 to 10 percent solution of nonionic surfactant at a flow rate of 2 fluid ounces per minute and a walking speed of 0.75 mph (2 to 4 quarts per acre).

Controlled droplet application equipment produces a spray pattern which 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.

### HAND-HELD and

### HIGH-VOLUME EQUIPMENT

Use coarse sprays only.

Mix this product in clean water and apply to foliage of vegetation to be controlled. For applications made on a spray-to-wet basis, spray coverage should be uniform and complete. Do not spray to the point of runoff.

For control of annual weeds listed on this label, apply 0.5 percent jolution of this product plus nonionic surfactant to weeds less than 6 inches in height or runner length. Apply prior to seedhead formation in grasses or bud formation in broadleaf weeds. Allow 3 or more days before tillage or moving.

For annual weeds over 6 inches tall, or unless otherwise specified, his a 1 percent solution. For best results, use a 2 percent solution on harder-to-

11982

control perennials, such as bermudagrass, dock, field bindweed, hemp dogbane, milkweed and Canada thistle.

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

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

### Spray Solution

18				
. 12	1-1/2	\$ . 2\$	5%	10%
oz 1-1/3	oz 2 oz	2-2/3	oz 6-1/2 oz	13 oz
t 1 gt	1-1/2	qt 2 qt	5 qt	10 qt
t 1 gal	1-1/2	gal 2 gal	5 gal	10 gal
fluid ounce		•	•	_
	t 1 qt t 1 gal fluid ounce	t 1 qt $1-1/2$ t 1 gal $1-1/2$ fluid ounce	t 1 qt 1-1/2 qt 2 qt t 1 gal 1-1/2 gal 2 gal fluid ounce	t 1 qt 1-1/2 qt 2 qt 5 qt t 1 gal 1-1/2 gal 2 gal 5 gal

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 and add the correct amount of surfactant.

### SELECTIVE EQUIPMENTS

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

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

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

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

AVOID CONTACT WITH DESIRABLE VEGETATION.

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

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

that not all weeds are contacted. In these instances, repeat treatment may be necessary.

### SHIELDED APPLICATORS

When applied as directed under conditions described for shielded applicators, this product will control those weeds listed in the ''WEEDS CONTROLLED'' section of this label.

Use the following equation to convert from a broadcast rate per acre to a band rate per acre:

Band width in inches Row width in inches	x	Herbicide broadcast RATE per acre	-	Herbicide band RATE per acre
Band width in inches Row width in inches	x	Broadcast VOLUME of solution per acre	-	Band VOLUME of solution per acre

Use nozzles that provide uniform coverage within the treated area. Keep shields on shielded sprayers adjusted to protect desirable vegetation. EXTREME CARE MUST BE EXERCISED TO AVOID CONTACT WITH DESIRABLE VEGETATION.

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

### WIPER APPLICATORS

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

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

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

Do not use wiper equipment when weeds are wet.

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

For Rope or Sponge Wick Applicators -- Mix 1 gallon of this product in 2 gallons of water plus 1 quart nonionic surfactant to prepare a 33 percent solution. Apply this solution to weeds listed in this ''WIPER APPLICATORS'' section.

For Porous-Plastic Applicators -- Solutions ranging from 33 to 100 percent of this product in water may be used in porous-plastic wiper applicators. Add 1 quart of a nonionic surfactant for every 4 gallons of solution.

When applied as recommended under the conditions described for ''WIPER APPLICATORS'', this product CONTROLS the following weeds:

# ANNUAL GRASSES

Corn

Zea mays

Rye, common Secale cereale

Panicum, Texas

Panicum texanum

Shattercane Sorghum bicolor

# ANNUAL BROADLEAVES

Sicklepod

Cassia obtusifolia

Spanishneedles

Bidens bipinnata

Starbur, bristly

Acanthospermum hispidum

When applied as recommended under the conditions described for ''WIPER APPLICATORS'', this product SUPPRESSES the following weeds:

# ANNUAL BROADLEAVES

Beggarweed, Florida

Desmodium tortuosum

Dogfennel

Eupatorium capilliflorium

Pigweed, redroot

Amaranthus

retroflexus

Ragweed, common

Ambrosia artemisiifolia

Ragweed, giant

Ambrosia trifida

Sunflower

Helianthus annuus

Thistle, musk

Carduus nutans

Velvetleaf

Abutilon theophrasti

### PERENNIAL GRASSES

13

Bermudagrass

Cynodon dactylon

Guineagrass

Panicum maximum

Johnsongrass

Sorghum halepense

Smutgrass

Sporobolus poiretii

Vaseygrass

Paspalum urvillei

# PERENNIAL BROADLEAVES

Dogbane, hemp

Apocynum cannabinum

**Kilkweed** 

Ascelepias syriaca

Nightshade, silverleaf

Solanum elaeagnifolium

Thistle, Canada

Cirsium arvense

### WEEDS CONTROLLED

This herbicide controls many annual and perennial grasses and broadleaf weeds.

# ANNUAL WEEDS

- Apply to actively growing grass and broadleaf weeds.
- Allow at least 3 days after treatment before tillage.
- For maximum agronomic benefit, apply when weeds are 6 inches or less in height.
- To prevent seed production, applications should be made prior to seedhead formation.
- This product does not provide residual control; therefore, delay application until maximum weed emergence. Repeat treatments may be necessary to control later germinating weeds.

LON-VOLUME BROADCAST APPLICATION (LON-RATE TECHNOLOGY)

When applied as directed under the conditions described, this product will control the weeds listed below when water carrier volumes of 3 to 10 callons per acre for ground applications and 3 to 5 gallons per acre for acrial applications are recommended. (See the 'AERIAL EQUIPMENT' section of this label for approved sites.)

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- The addition of 2 percent dry ammonium sulfate by weight or 17 pounds per 100 gallons of water may increase the performance of this product on annual weeds. The improvement in performance may be apparent where environmental stress is a concern. Refer to the ''MIXING, ADDITIVES AND APPLICATION INSTRUCTIONS'' section of this label.
- Do not tank-mix with soil-residual herbicides when using these rates unless otherwise specified.
- For weeds that have been moved, grazed or cut, allow regrowth to occur prior to treatment.
- Refer to the ''TANK MIXTURES'' portion of this section for control of additional broadleaf weeds.

weed species	MAXIMUM HEIGHT/LENGTH	PER ACRE* (FLUID OUNCES)
<b>Toxtail</b>		
Setaria spp.	12"	8 oz.
Barnyardgrass	6"	12 oz.
Echinochloa	(0 to 4"	16 oz. <sup>1</sup> )
crus-galli	(4 to 6"	24 oz. <sup>1</sup> )

Bluegrass, annual Poa annua

Brome, downy\*\*

Bromus tectorum

Mustard, blue Chorispora tenella

Mustard, tansy
Descurainia pinnata

Mustard, tumble Sisymbrium altissimum

Mustard, wild Sinapis arvensis

Spurry, umbrella Holosteum umbellatum

Barley Hordeum vulgare	12"
Rve	

Sandbur, field Cenchrus spp.

Secale cereale

Shattercane Sorghum bicolor

# Stinkgrass Eragrostis cilianensis

18"		
2* ·	16 oz	
	·.	
6"	<del></del>	
	, , , ,	
	****	****
12"		; ; ; ; ; ;
	6"	2" 16 oz

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Crabgrass
Digitaria spp.

Dwarfdandelion Krigia cespitosa

Falseflax, smallseed Camelina microcarpa

Fortail, Carolina Alopecurus carolinianus

Johnsongrass, seedling Sorghum halepense

Oats, wild Avena fatua

Panicum, fall
Panicum
dichotomiflorum

Panicum, Texas
Panicum texanum

Pigweed, redroot Amaranthus retroflexus

Pigweed, smooth
Amaranthus hybridus

Witchgrass
Panicum capillare

Sicklepod Cassia obtusifolia

Cassia obtusifolia

Signalgrass, broadleaf
Brachiaria
platyphylla

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Horseweed/Marestail Conyza canadensis

Lambsquarters, common Chenopodium album

Spurge, annual Euphorbia spp.

Rice, red
Oryza sativa

Teaveed Sida spinosa 4"

3 to 4"

7 to 12"

32 oz.

24 oz

17

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Sprangletop

6"

Leptochloa spp.

Geranium, Carolina

12"

Geranium

carolinianum

Goosegrass

Eleusine indica

Primrose, cutleaf

evening

Oenothera laciniate

Pusley, Florida

Richardia scabra

Sicklepod

Cassia obtusifolia

5 to 12"

Spanishneedles

Bidens bipinnata

Filaree

Erodium spp.

12"

48 oz.

Sprangletop

Leptochloa spp.

- \* For those rates less than 32 fluid ounces per acre, this product at rates up to 32 fluid ounces per acre may be used where heavy weed densities exist.
- \*\* For control in no-till systems, use 16 fluid ounces per acre.
- TANK MIXTURES ■

PROTOCOL plus BANVEL

PROTOCOL plus 2,4-D

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

These tank mixtures are recommended for use in fallow and reduced tillage areas only. Follow use directions as given in the ''LOW-VOLVIME PROBUCAST APPLICATION'' section.

This product plus Banvel or 2,4-D will control the armyal grasses and broadleaf weeds listed for this product alone at the indicated, heights (except 8 fluid ounces per acre applications), plus the following broadleaf weeds. For those weeds previously listed at 8 fluid ounces of this product alone per acre, use 12 fluid ounces in these tank mixtures.

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<sup>&</sup>lt;sup>1</sup>Use these rates to control barnyardgrass in Alabama, Arkansas, Louisiana, Mississippi, Missouri and Texas for preplant treatments.

NOTE: 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 Banvel is applied within 45 days of planting. The addition of Banvel in a mixture with this product may provide short-term residual control of selected weed species.

Apply 12 to 16 fluid ounces of this product plus 0.25 pound a.i. of Banvel or 0.5 pound a.i. of 2,4-D per acre to control dense populations of the following annual broadleaf weeds when less than the height indicated:

Cocklebur (12")

Xanthium strumarium

Kochia\* (6")
Kochia scoparia

Lambsquarters (12")
Chenopodium album

Lettuce, prickly (6")
Lactuca serriola

Marestail/Horseweed (6") Conyza canadensis

Morningglory (6")
Ipomoea spp.

Pigweed, redroot (12")
Amaranthus retroflexus

Pigweed, smooth (12")
Amaranthus hybridus

Thistle, Russian (12") Salsola kali

\*Controlled with Banvel tank mixture only.

Apply 16 fluid ounces of this product plus 0.5 pound a.i. of 2.4-D per acre to control the following annual broadleaf weeds when less than 6 inches in height.

Ragweed, common Ambrosia artemisiifolia

Ragweed, giant Ambrosia trifida

Smartweed, Pennsylvania Polygonum pensylvanicum

Velvetleaf

Abutilon theophrasti

# HIGH-VOLUME BROADCAST APPLICATIONS

When applied as directed under the conditions described, this product will control the weeds listed below when water carrier volumes are 10 to 40 gallons per acre for ground applications.

Use 1 quart of this product per acre if weeds are less than 6 inches tall. If weeds are over 6 inches tall, use 1.5 quarts of this product per acre. If weeds have been moved, grazed or cut, allow adequate time for new growth to reach recommended stages prior to treatment. These rates will also provide control of weeds listed in the ''LOW-VOLUME BROADCAST APPLICATION'' section.

# WEED SPECIES

Balsamapple\*
Momordica charantia

Bassia, fivehook Bassia hyssopifolia

Brome

Bromus spp.

Fiddleneck
Amsinckia spp.

Fleabane, hairy Conyza bonariensis

Fleabane Erigeron spp.

Kochia scoparia

Lettuce, prickly
Lactuca serriola

Panicum
Panicum spp.

Ragweed, common Ambrosia artemisiifolia

Ragweed, giant Ambrosia trifida

Smartweed, Pennsylvania Polygonum pensylvanicum

Sowthistle, annual Sonchus oleraceus

Sunflower
Helianthus annuus

Thistle, Russian Salsola kali

**Velvetleaf**Abutilon theophrasti

\*Apply with hand-held equipment only.

# PERENNIAL WEEDS

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

NOTE: If weeds have been moved or tilled, do not treat until plants have resumed active growth and have reached the recommended stages of growth.

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

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

When applied as recommended under the conditions described, this product WILL CONTROL the following PERENNIAL WEEDS:

### Alfalfa

Medicago sativa

Alligatorweed\*
Alternanthera
philoxeroides

Anise (fennel)
Foeniculum vulgare

Artichoke, Jerusalem Helianthus tuberosus

Bahiagrass
Paspalum notatum

Bentgrass
Agrostis spp.

Bermudagrass Cynodon dactylon

Bermudagrass, water (knotgrass)
Paspalum distichum

Bindweed, field Convolvulus arvensis

Bluegrass, Kentucky Poa spp.

Blueweed, Texas
Helianthus ciliaris

Brackenfern
Pteridium aquilinum

Bromegrass, smooth
Bromus inermis

Bursage, woollyleaf Franseria tomentosa

Canarygrass, reed

Cattail

Typha spp.

Clover, red Trifolium pratense

Clover, white Trifolium repens

Cogongrass
Imperata cylindrica

Dallisgrass
Paspalum dilatatum

Dandelion
Taraxacum officinale

Dock, curly
Rumex crispus

Dogbane, hemp
Apocynum cannabinum

Fescues
Festuca spp.

Fescue, tall
Festuca arundinacea

Guineagrass
Pancium maximum

Horsenettle
Solanum carolinense

Horseradish Armoracia rusticana

Ice plant

<u>Mesembryanthemum crystallinum</u>

Johnsongrass Sorghum halepense

Kikuyugrass Pennisetum clandestinum

Knapweed Centaurea repens

Lantana camara

Lespedeza spp.

Milkweed Asclepias spp. Muhly, wirestem
Muhlenbergia frondonsa

Mullein, common Verbascum thapsus

Napiergrass
Pennisetum purpureum

Mightshade, silverleaf Solanum elaeagnifolium

Nutsedge: purple, yellow Cyperus rotundus Cyperus esculentus

Orchardgrass
Dactylis glomerata

Pampasgrass Cortaderia <u>jubata</u> <u>spp</u>.

Paragrass
Brachiaria mutica

Phragmites\*
Phragmites spp.

Poison hemlock
Conium maculatum

Quackgrass
Agropyron repens

Redvine\*
Brunnichia ovata

Reed, giant Arundo donax

Ryegrass, perennial Lolium perenne

Smartweed, swamp
Polygonum coccineum

Spurge, leafy\*
Euphorbia esula

Starthistle, yellow Centaurea solstitalis

Sweet potato, wild\*
Ipomoea pandurata

Thistle, Canada Cirsium arvense

Thistle. artichoke

Cvnara cardunculus

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Timothy
Phleum pratense

Torpedograss\*
Panicum repens

Trumpet creeper\*
Campsis radicans

Vaseygrasa Paspalum urvillei

Yelvetgrass
Holcus spp.

Wheatgrass, western Agropyron smithil

\*Partial control

This product is not registered in California for use on water bermudagrass.

Alfalfa — Apply 1 quart of this product in 3 to 10 gallons of water per acre. Make application after 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 — Apply 4 quarts of this product per acre or apply a 1.5 percent solution with hand-held equipment to provide partial control. Apply when most of the plants are in bloom, Repeat applications will be required to maintain such control.

Anise (fennel)/Poison hemlock-Apply a 1 to 2 percent solution of this product as a spray-to-wet treatment. Optimum results are obtained when plants are treated at the bud to full-bloom stage of growth. Repeat applications may be needed in succeeding years to control plants arising from seeds.

Bentgrass — For suppression in grass seed production areas. For ground applications only, apply 1.5 quarts of this product in 10 to 20 gallons of water per acre. 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. Failure to use tillage after treatment may result in unacceptable control.

Bermudagrass — For control, apply 5 quarts of this product per acre. For partial control, apply 3 quarts per acre. Treat when bermudagrass is actively growing and seedheads are present. Retreatment may be necessary to maintain control. Allow 7 or more days after application before tillage.

Bermudagrass, water (knotgrass) -- Apply 1.5 quarts of this product in 5 to 10 gallons of water per acre. Apply when water bermudagrass is actively growing and 12 to 18 inches in length. Allow 7 or more days before tilbing, flushing or flooding the field.

Fall applications only -- Apply 1 quart of this product in 5 to 10 gallens of water per acre. Fallow fields should be tilled prior to application. Apply prior to frost on water bermudagrass that is actively growing and 12 to 18 inches in length. Allow 7 or more days before tillage.

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Bindweed, field -- For control, apply 4 to 5 quarts of this product per acrewest of the Mississippi River and 3 to 4 quarts east of the Mississippi River. Apply when the weeds are actively growing and are at or beyond full bloom. Do not treat when weed is under drought stress as good soil moisture is necessary for active growth. For best results, apply in late summer or fall. Fall treatments must be applied before a killing frost. Allow 7 or more days after application before tillage.

Also for control, apply 2 quarts of this product plus 0.5 pound a.i. of Banvel in 10 to 20 gallons of water per acre. At these rates, apply using ground application only.

For suppression on irrigated agricultural land apply 1 to 2 quarts of this product plus 1 pound a.i. of 2,4-D in 10 to 20 gallons of water per acre with ground equipment only. Applications should be made following harvest or on fall fallow ground when the bindweed is actively growing and the majority of runners are 12 inches or more in length. The use of at least one irrigation will promote active bindweed growth.

For suppression, apply 16 fluid ounces of this product plus 0.5 pounds a.i. 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. Applications should be delayed until maximum emergence has occurred and when vines are between 6 to 18 inches in length.

In California only, apply 1 to 5 quarts of this product per acre. Actual rate needed for suppression or control will vary within this range depending on local conditions.

For suppression on irrigated land where annual tillage is performed, apply 1 quart of this product in 3 to 10 gallons of water per acre. Apply to actively growing bindweed that has reached a length of 12 inches or greater. Allow maximum weed emergence and runner growth. Do not treat when weed is under drought stress as good soil moisture is necessary for active growth. Allow 3 or more days after application before tillage.

Bluegrass, Kentucky / Bromegrass, smooth / Orchardgrass — Apply 2 quarts of this product in 10 to 40 gallons of water per acre when the grasses are actively growing and most plants have reached boot-to-early seedhead stage of development. For partial control in pasture or hay crop renovation, apply 1 to 1.5 quarts of this product in 3 to 10 gallons of water per acre. Apply to actively growing plants when most have reached 4 to 12 inches in height. Allow 7 or more days after application before tillage.

Orchardgrass (sods going to no-till corn) -- Apply 1 to 1.5 quarts of this product in 3 to 10 gallons of water per acre. Apply to orchardgrass that is a minimum of 12 inches tall for spring applications and 6 inches tall for fall applications. Allow at least 3 days following application before planting. A sequential application of atrazine will be necessary for optimum results.

Blueweed, Texas -- Apply 4 to 5 quarts of this product per, acre west of the Mississippi River and 3 to 4 quarts per acre east of the Mississippi, River. Apply when weed is actively growing and is at or beyond full bloom. Do not treat when weed is under drought stress as good soil moistyre is necessary for active growth. New leaf development indicates active growth. For best result, apply in late summer or fall. Fall treatments must be applied

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before a killing frost. Allow 7 or more days after application before tillage.

Brackenfern -- Apply 3 to 4 quarts of this product per acre as a broadcast spray or as a 1 to 1.5 percent solution with hand-held equipment. Apply to fully expanded fronds which are at least 18 inches long.

Bursage, woollyleaf — For control, apply 2 quarts of this product plus 1 pint of Banvel per acre. For partial control, apply 1 quart of this product plus 1 pint of Banvel per acre. Apply in 3 to 20 gallons of water per acre. Apply when plants are producing new active growth which has been initiated by moisture for at least 2 weeks and when plants are at or beyond flowering.

Canarygrass, reed / Timothy / Wheatgrass, western — Apply 2 to 3 quarts of this product per acre. For best results, apply to actively growing plants when most have reached the boot-tu-head stage of growth. Allow 7 or more days after application before tillage.

Cogongrass — Apply 3 to 5 quarts of this product in 10 to 40 gallons of water per acre. Apply when cogongrass is at least 18 inches tall and actively growing in late summer or fall. Allow 7 or more days after application before tillage or mowing. Due to uneven stages of growth and the dense nature of vegetation preventing good spray coverage, repeat treatments may be necessary to maintain control.

Dandelion/Dock, curly -- Apply 3 to 5 quarts of this product per acre when plants are actively growing and most have reached the early bud stage of growth. Allow 7 or more days after application before tillage.

Also for control, apply 16 fluid ounces of this product plus 0.5 pounds a.i. 2,4-D in 3 to 10 gallons of water per acre.

Dogbane, hemp -- Apply 4 quarts of this product per acre. Apply when actively growing and when most weeds have reached the late bud to flower stage of growth. Following crop harvest or mowing, allow weeds to regrow to a mature stage prior to treatment. For best results, apply in late summer or fall. Allow 7 or more days after application before tillage.

For suppression, apply 16 fluid ounces of this product plus 0.5 pound a.i. 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, tall — Apply 3 quarts of this product in 10 to 40 gallons of water per acre to actively growing plants when most have reached boot-to-carly seedhead stage of development.

Fall applications only — Apply 1 quart of this product in 3 to 10 gallons of water per acre. Apply to fescue in the fall when actively growing and plants have 6 to 12 inches of new growth. Allow 7 or more days after application before tillage. A sequential application of 1 pint per acre of this product will improve long-term control and control seedlings germinating after fall treatments or the following spring.

Guineagrass — Apply 3 quarts of this product per acre or use a 1 percent solution with hand-held equipment Apply to actively growing guineagrass when most have reached at least the 7-leaf stage of growth. Ensure thorough

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coverage when using hand-held equipment. Allow 7 or more days after application before tillage.

Johnsongrass / Ryegrass, perennial — Apply 1 to 3 quarts of this product per acre. In annual cropping systems, apply 1 to 2 quarts of this product per acre. Apply 1 quart of this product in 3 to 10 gallons of water per acre. Use 2 quarts of this product when applying 10 to 40 gallons of water per acre. In noncrop or areas where annual tillage (no-till) is not performed, apply 2 to 3 quarts of this product in 10 to 40 gallons of water per acre. For best results, apply to actively growing plants when most have reached the boot-to-head stage of growth. Allow 7 or more days after application before tillage. Do not tank-mix with residual herbicides when using the 1 quart per acre rate.

For burndown of Johnsongrass, apply 1 pint 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 1 percent solution of this product when Johnsongrass is 12 to 18 inches in height. Coverage should be uniform and complete.

Kikuyugrass — Apply 2 to 3 quarts of this product per acre. Spray when most kikuyugrass is at least 8 inches in height (3 or 4-leaf stage of growth) and actively growing. Allow 3 or more days after application before tillage.

Knapweed/Horseradish -- Apply 4 quarts of this product per acre. Apply when actively growing and when most weeds have reached the late bud to flower stage of growth. Following crop harvest or mowing, allow weeds to regrow to a mature stage prior to treatment. For best results, apply in late summer or fall. Allow 7 or more days after application before tillage.

Lantana — Apply this product as a 1 to 1.25 percent solution using hand-held equipment only. Apply to actively growing lantana at or beyond the bloom stage of growth. Use the higher application rate for plants that have reached the woody stage of growth. Allow 7 or more days after application before tillage.

Milkweed, common — Apply 3 quarts of this product per acre. Apply when actively growing and most of the milkweed has reached the late bud to flower stage of growth. Following small grain harvest or mowing, allow milkweed to regrow to a mature stage prior to treatment. Allow 7 or more days after application before tillage.

Muhly, wirestem — Apply 1 to 2 quarts of this product per acre. Use 1 quart of this product in 3 to 10 gallons of water per acre. Use 2 quarts of this product when applying 10 to 40 gallons of water per acre or in pasture, sod, or noncrop areas. Spray when the wirestem muhly is 8 inches or more in height and actively growing. Do not till between harvest and fall applications for in the fall or spring prior to spring applications. Allow 3 or more days after application before tillage. This product will not provide residual opported of wirestem muhly from seeds which germinate after an application of this product. Do not tank mix with residual herbicides when using the 1 quant per acre rate.

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Nightshade, silverleaf — For control, apply 2 quarts of this product in 3 to 10 gallons of water per acre. Applications should be made when at least 60 percent of plants have berries. Fall treatments must be applied before a killing frost. Allow 7 or more days after application before tillage. Do not treat when weed is under drought stress, as good soil moisture is necessary for active growth.

Mutsedge: purple, yellow -- Apply 3 quarts of this product per acre as a broadcast spray, or apply a 1 to 2 percent solution from hand-held equipment to control existing nutsedge plants and immature nutlets attached to treated plants. Treat when plants are in flower or when new nutlets can be found at rhizome tips. Nutlets which have not germinated will not be controlled and may germinate following treatment. Repeat treatments will be required for long-term control of ungerminated tubers. Sequential applications of 1 to 2 quarts of this product in 3 to 10 gallons of water per acre will provide control. Make applications when a majority of the plants are in the 3 to 5-leaf stage (less than 6 inches tall). Repeat this application, as necessary, when newly emerging plants reach the 3 to 5-leaf stage. Subsequent applications will be necessary for long-term control.

For suppression of existing plants, apply 1 pint to 2 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. Wait 7 days after treatment before tillage or mowing.

Pampasgrass/Ice plant — Apply this product as a 1.5 to 2 percent solution using hand-held equipment. Apply to plants that are actively growing.

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

Phragmites — For partial control of phragmites in Florida and the counties of other states bordering the Gulf of Mexico, apply 5 quarts per acre as a broadcast spray or apply a 2 percent solution from hand-held equipment. In other areas of the U.S., apply 3 quarts per acre as a broadcast spray or apply a 1 percent solution from hand-held equipment for partial control. For best results, treat during late summer or fall months or when plants are actively growing and in full bloom. Treatment before or after this stage may lead to reduced control. Due to 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.

Quackgrass — In Annual Cropping Systems, or in Pastures and Sods Followed by Deep Tillage: Apply 1 to 2 quarts of this product per acre. For the 1 quart rate, apply in 3 to 10 gallons of water per acre. For the 2 quart rate, apply in 10 to 40 gallons of water per acre. Do not tank mix with residual herbicides when using the 1 quart rate. Spray when quackgrass is 6 to 8 inches in height and actively growing. Do not till between harvest and fall applications or in fall or spring prior to spring application. Allow 3 or more days after application before tillage. In pastures or sods, use a moldboard plow for best results.

Quackgrass — Pasture or Sod or Other Noncrop Areas Where Deep Tillage is Not Planned Following Application: Apply 2 to 3 quarts in 10 to 40 gallons of

water per acre. Spray when the quackgrass is greater than 8 inches tall and actively growing. Do not till between harvest and fall application or in fall or spring prior to spring application. Allow 3 or more days after application before tillage.

Redwine -- For suppression, apply 24 fluid ounces of this product per acre at each of 2 applications 7 to 14 days apart or a single application of 2 quarts per acre. Apply recommended rates in 5 to 10 gallons of water per acre. Apply in late September or early October to actively growing plants, which are at least 18 inches tall and have been growing 45 to 60 days since the last tillage operation. Make applications at least 1 week before a killing frost.

Reed, giant — For control of giant reed, apply a 2 percent solution of this product when plants are actively growing. Best results are obtained when applications are made in late summer to fall.

Smartweed, swamp -- Apply 3 to 5 quarts of this product per acre when plants are actively growing and most have reached the early bud stage of growth. Allow 7 or more days after application before tillage.

Also for control, apply 16 fluid ounces of this product plus 0.5 pound a.i. 2,4-D in 3 to 10 gallons of water per acre in the late summer or fall. Apply when plants are actively growing and most have reached the early bud stage of growth. Allow 7 or more days after application before tillage.

Spurge, leafy -- For suppression, apply 16 fluid ounces of this product plus 0.5 pound a.i. 2,4-D in 3 to 10 gallons of water per acre in the late summer or fall. Apply when plants are actively growing. If mowing has occurred prior to treatment, apply when most of the plants are 12 inches tall. Allow 7 or more days after application before tillage.

Starthistle, yellow--Best results are obtained when applications are made during periods of active growth, including the rosette, bolting and early flower stage. For spray-to-wet applications, apply this product as a 2 percent solution. For broadcast applications, apply 2 quarts per acre in 10 to 40 gallons per acre of water carrier.

Sweet Potato, wild/Thistle, artichoke — Apply this product as a 2 percent solution using hand-held equipment. Apply to actively growing weeds that are at or beyond the bloom stage of growth. Repeat applications will be required. Allow the plant to reach the recommended stage of growth before retreatment. Allow 7 or more days before tillage.

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

For suppression of Canada thistle, apply 1 quart of this product, or 1 pint of this product plus 0.5 pounds a.i. 2,4-D, in 3 to 10 gallons of water per acre in the late summer or fall after harvest, mowing or tillage. Allow

rosette regrowth to a minimum of 6 inches in diameter before treating. Applications can be made as long as leaves are still green and plants are actively growing at the time of application. Allow 3 or more days after application before tillage.

Torpedograss — Apply 4 to 5 quarts of this product per acre to provide partial control of torpedograss. Apply to actively growing torpedograss when most plants are at or beyond the seedhead stage of growth. Repeat applications will be required to maintain control. Fall treatments must be applied before frost. Allow 7 or more days after application before tillage.

Trumpetcreeper -- For control, apply 2 quarts of this product in 5 to 10 gallons of water per acre. Apply in late September or October to actively growing plants which are at least 18 inches tall and have been growing 45 to 60 days since the last tillage operation. Make applications at least 1 week before a killing frost.

Other perennials listed on this label — Apply 3 to 5 quarts of this product per acre. Apply when actively growing and most have reached early head or early bud stage of growth. Allow 7 or more days after application before tillage.

### WOODY BRUSH AND TREES

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

### Alder

Alnus spp.

### Ash\*

Fraxinus spp.

# Aspen, quaking

Populus tremuloides

### Bearmat (Bearclover)

Chamaebatia foliolosa

### <u>Beech</u>

<u>Fagus grandifolia</u>

### Birch

Betula spp.

### Blackberry

Rubus spp.

### Blackqum

Nyssa spp.

# **Bracken**

Pteridium spp.

### Broom:

French

#### Broom:

French

Cytisus monspessulanus

Scotch

Cytisus scoparius

Buckwheat, California\*
Eriogonum fasciculatum

Cascara\*

Rhamnus purshiana

Catsclaw\*

Acacia greggi

Ceanothus\*

Ceanothus spp.

Chamise

Adenostoma

fasciculatum

Cherry:

**Bitter** 

Prunus emarginata

Black

Prunus serotina

Pin

Prunus pensylvanica

Coyote brush

Baccharis consanguinea

Creeper, Virginia\*

Parthenocissus quinquefolia

Dewberry

Rubus trivialis

Dogwood\*

Cornus spp.

Elderberry

Sambucus spp.

Elm\*

Ulmus spp.

Eucalyptus

Eucalyptus spp.

GOISE

Ulex europaeus

Hasardia\*

Haplopappus squamosus

Hawthorn

Crataegus spp.

Hazel

Corylus spp.

Hickory\*

Carva spp.

Holly, Florida/Brazilian Peppertree\*

Schinus terebinthifolius

Honeysuckle

Lonicera spp.

Hornbeam, American\*

<u>Carpinus caroliniana</u>

Kudzu

Pueraria lobata

Locust, black\*

Robinia pseudoacacia

Madrone

Arbutus menziesii

Manzanita

Arctostaphylos spp.

Maple:

Red\*\*

Acer rubrum

Sugar

Acer saccharum

Vine\*

Acer circinatum

Monkey Flower\*

Mimulus guttatus

Oak:

Black\*

Quercus velutina

Northern Pin

32

Quercus palustris

Post

Quercus stellata

Red

Quercus rubra

Southern Red Quercus falcata

White\*

Quercus alba

Persimmon\*

Diospyros spp.

Pine

Pinus spp.

Poison Ivy

Rhus radicans

Poison Oak

Rhus toxicodendron

Poplar, yellow\*

Liriodendron tulipifera

Raspberry

Rubus spp.

Redbud, eastern

<u>Cercis canadensis</u>

Rose, multiflora

Rosa multiflora

Russian-olive\*\*\*

Eleagnus angustifolia

Sage, black, white

Salvia mellifera spp.

Sagebrush, California

Artemisia californica

Salmonberry

Rubus spectabilis

Salt\_cedar

Tamarixs spp.

Sassafras

Sassafras aibidum

#### Sourwood

Oxydendrum arboreum

#### Sumac:

Poison\*

Rhus vernix

Smooth\*

Rhus glabra

Winged\*

Rhus copallina

## Sweetqum

Liquidambar styraciflua

### Swordfern\*

Polystichum munitum

### Tallowtree, Chinese

Sapium sebiferum

### Tan oak

Lithocarpus densiflorus

### Thimbleberry

Rubus parviflorus

# Tobacco, tree\*

Nicotiana glauca

# Trumpetcreeper

Campsis radicans

# Waxmyrtle, southern\* Myrica cerifera

# Willow

Salix spp.

- \* Partial control.
- \*\* See below for control or partial control instructions.
- \*\*\* This product is not registered in California for use on Russian slive.

NOTE: If brush has been mowed or tilled or trees have been cut, do not treat until regrowth has reached the recommended stages of growth.

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

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

Ensure thorough coverage when using 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.

Apply this product as follows to control or partially control the following woody brush and trees.

Alder / Dewberry / Honeysuckle / Post Oak / Raspberry — For control, apply 3 to 4 quarts of this product per acre as a broadcast spray or as a 1 to 1.5 percent solution with hand-held equipment.

Aspen, quaking / Cherry: bitter, black, pin / Hawthorn / Oak, southern red / Sweetgum / Trumpetcreeper — For control, apply 2 to 3 quarts of this product per acre as a broadcast spray or as a 1 to 1.5 percent solution with handheld equipment.

Birch / Elderberry / Hazel / Salmonberry / Thimbleberry — For control, apply 2 quarts of this product per acre as a broadcast spray or as a 1 percent solution with hand-held equipment.

Blackberry — For control, apply 3 to 4 quarts of this product per acre as a broadcast spray, or as a 1 to 1.5 percent solution with hand-held equipment. Make application after plants have reached full leaf maturity. Best results are obtained when applications are made in late summer or fall. After berries have set or dropped in late fall, blackberry can be controlled by applying a 0.75 percent solution of this product with hand-held equipment. For control of blackberries after leaf drop and until killing frost or as long as stems are green, apply 3 to 4 quarts of this product in 10 to 40 gallons of water per acre.

Broom: French, Scotch — For control, apply a 1.5 to ? percent solution with hand-held equipment.

Buckwheat, California / Hasardia / Monkey Flower / Tobacco, tree — For partial control of these species, apply a 1 to 2 percent solution of this product as a foliar spray with hand-held equipment. Thorough coverage of foliage is necessary for best results.

Catsclaw — For partial control, apply as a 1 to 1.5 percent solution with hand-held equipment.

Coyote Brush — For control, apply a 1.5 to 2 percent solution with hand-held equipment when at least 50 percent of the new leaves are fully developed.

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Eucalyptus — For control of eucalyptus resprouts, apply a 2 percent solution of this product with hand-held equipment when resprouts are 6 to 12 feet tall. Ensure complete coverage. Apply when plants are growing actively. Avoid application to drought-stressed plants. For control of eucalyptus trees 2 inches or less in diameter, cut trees as close to the soil surface as desired. Apply a 50 to 100 percent solution of this product to the freshly cut surface immediately after cutting. Delay in applying this product may result in reduced performance.

**Kudzu** — For control, apply 4 quarts of this product per acre as a broadcast spray or as a 2 percent solution with hand-held equipment. Repeat applications will be required to maintain control.

Madrone resprouts — For suppression or partial control, apply a 2 percent solution of this product to resprouts less than 3 to 6 feet tall. Best results are obtained with spring/early summer treatments.

Maple, red — For control, apply as a 1 to 1.5 percent solution with handheld equipment when at least 50 percent of the new leaves are fully developed. For partial control, apply 2 to 4 quarts of this product per acre as a broadcast spray.

Maple, sugar / Oak, northern pin / Oak, red — For control, apply as a 1 to 1.5 percent solution with hand-held equipment when at least 50 percent of the new leaves are fully developed.

Poison Ivy / Poison Oak — For control, apply 4 to 5 quarts of this product per acre as a broadcast spray or as a 2 percent solution with hand-held equipment. Repeat applications may be required to maintain control. Fall treatments must be applied before leaves lose green color.

Rose, multiflora — For control, apply 2 quarts of this product per acre as a broadcast spray or as a 1 percent solution with hand-held equipment. Treatments should be made prior to leaf deterioration by leaf-feeding insects.

Sage, black / Sagebrush, California / Chamise / Tallowtree, Chinese — For control of these species, apply a 1 percent solution of this product as a foliar spray with hand-held equipment. Thorough coverage of foliage is necessary for best results.

Tan oak resprouts — For suppression or partial control, apply a 2 percent solution of this product to resprouts less than 3 to 6 feet tall. Best results are obtained with spring/early summer treatments.

Willow — For control, apply 3 quarts of this product per acre as a broadcast spray or as a 1 percent solution with hand-held equipment.

Other Woody Brush and Trees listed on this label — For partial control, apply 2 to 4 quarts of this product per acre as a broadcast spray or as a 1 to 2 percent solution with hand-held equipment.

### NONCROP USES

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See ''GENERAL INFORMATION'' and ''MIXING, ADDITIVES AND APPLICATION' INSTRUCTIONS'' sections of this label for essential product performance information and the following ''NONCROP'' sections for specific recommended uses.

EXTREME CARE MUST BE EXERCISED TO AVOID CONTACT OF SPRAY WITH FOLIAGE, GREEN STEMS, EXPOSED NON-WOODY ROOTS OR FRUIT OF CROPS, DESIRABLE TURFGRASSES, TREES, SHRUBS, OR OTHER DESIRABLE VEGETATION SINCE SEVERE DAMAGE OR DESTRUCTION MAY RESULT.

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

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

This product does not provide residual weed control. For subsequent 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.

# INDUSTRIAL, RECREATIONAL AND PUBLIC AREAS

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

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

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

- PROTOCOL® plus OUST

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

This tank mixture may also be used as a site preparation treatment for sites to be planted to jack pine, loblolly pine, red pine, slash pine and Virginia pine.

When applied as directed for ''NONCROP USES'' under the conditions described, this product plus Oust provides control of annual weeds listed in the ''WEEDS CONTROLLED'' section of the label for this product and Oust, and control or partial control of the perennial weeds listed below.

Apply 1 to 2 quarts of this product with 2 to 4 ounces of Oust in 10 to 40 gallons of spray solution per acre as a broadcast spray to actively growing weeds.

This minture may be applied by aerial equipment in site prep operations. When applied by air, use the recommended rates in 5 to 15 gallons of spray solution per acre.

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

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

## **Bahiagrass**

Paspalum notatum

## Bermudagrass\*

Cynodon dactylon

## Broomsedge

Andropogon virginicus

Dock, curly
Rumex crispus

## Dogfennel

Eupatorium capilliforium

## Fescue, tall

Festuca arundinacea

#### Johnsongrass\*\*

Sorghum halepense

# Poorjoe\*\*

Diodia teres

## Quackgrass

Agropyron repens

#### Trumpetcreeper\*

Campsis radicans

## Vaseygrass

Paspalum urvillei

# Vervain, blue

Verbena hastata

\*Suppression at the higher rates only.

\*\*Control at the lower rates.

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

# ■ TANK MIXTURES ■ NONCROP SITES

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

- PROTOCOL plus DIURON ■
- PROTOCOL plus KROVAR™ I ■
- PROTOCOL plus KROVAR II ■
- PROTOCOL plus RONSTAR™ 50WP ■
- PROTOCOL plus SIMAZINE, PRINCEP™ CALIBER 90™
- PROTOCOL plus SIMAZINE 4L
- PROTOCOL plus SIMAZINE 80W ■
- PROTOCOL plus SURFLAN™ 75W ■
- PROTOCOL plus SURFLAN AS ■

See the ''MIXING, ADDITIVES AND APPLICATION INSTRUCTIONS'' section of this label before preparing these tank mixtures.

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

## CONTROL OF EMERGED WEEDS

Note: For backpack sprayer and handgun applications, see the "HAND-HELD AND HIGH VOLUME EQUIPMENT" section for recommended rates.

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

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

#### PREZMERGENCE WEED CONTROL

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

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

APPLY THESE TANK MIXTURES THROUGH CONVENTIONAL BROADCAST SQUIPMENT ONLY.

## FARMSTEAD WEED CONTROL

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

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

#### FARM DITCHES

This product will suppress perennial grasses along farm ditches. Apply this product at a rate of 6 to 8 fluid ounces per acre. Use 8 fluid ounces per acre when treating tall (coarse) fescue, fine fescue, orchardgrass or quackgrass covers. For best suppression of these species, add ammonium sulfate at a rate of 1.7 pounds per 10 gallons of spray solution. Use 6 fluid ounces per acre without ammonium sulfate when treating Kentucky bluegrass.

Apply treatments in 10 to 20 gallons of spray solution per acre to actively growing perennial grass covers. For best spray distribution and coverage, use flat fan nozzles.

Where broadleaf weed control or suppression is desired, tank mix this product with an appropriate, labeled broadleaf weed herbicide.

This product can be used to control undesirable vegetation when rotating out of CRP acres or to suppress competitive growth and seed production of undesirable vegetation in CRP acres.

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

CRP applications may be made with wiper applicators or conventional spray equipment.

For selective applications with broadcast spray equipment, apply 12 to 16 ounces of this product per acre in early spring before desirable CRP grasses, such as crested and tall wheatgrass, break dormancy and initiate green growth. Late fall applications can be made after desirable perennial grasses have reached dormancy. Some stunting of CRP perennial grasses will occur if applications are made when plants are not dormant.

#### HABITAT MANAGEMENT

This product is recommended for the restoration and/or maintenance of native habitats and in wildlife managment areas. Apply as recommended in the "NONCROP USES" section of this label.

Habitat Restoration and Maintenance -- When applied as directed, exotic and other undesirable vegetation may be controlled in habitat managment areas. Applications can be made to allow recovery of native plant species, prior to planting desirable native species, and for similar broadspectrum vegetation control requirements in habitat management areas. Spot treatments can be made to selectively remove unwanted plants for habitat maintenance and enhancement. For spot treatments, care should be exercised to keep spray off of desirable plants.

Wildlife Food Plots -- This product may be used as a site preparation treatment prior to planting wildlife food plots. Any wildlife food species may be planted after applying this product, or native species may be allowed to repopulate the area. If tillage is needed to prepare a seedbed, wait 7 days after applying this product before tilling.

## ORNAMENTALS, TREE NURSERIES AND CHRISTMAS TREES

THIS PRODUCT IS NOT RECOMMENDED FOR USE AS AN OVER-THE-TOP BROADCAST SPRAY IN ORNAMENTALS AND CHRISTMAS TREES.

NOTE:

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

When applied as instructed for the conditions described for "NONCROP USES", this product controls undesirable vegetation listed on this label prior to planting, within and around greenhouses and shadehouses, and as a postdirected spray around established ornamentals and Christmas trees.

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

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

Site Preparation—Following preplant applications of this product, any ornamental, nursery species or Christmas tree species may be planted. Precautions should be taken to protect nontarget plants during site preparation applications.

Greenhouse/Shadehouse Use—This product may be used to control weeds listed on this label which are growing in greenhouses. Desirable vegetation must not be present during application and air circulation fans must be turned off.

Postdirected Spray—Use as a postdirected spray around established woody ornamental species, nursery species or Christmas trees such as those listed below. Care must be exercised to avoid contact of spray, drift or mist with foliage or green bark of established ornamental species.

## Arborvitae

Thuja spp.

#### Azalea

Rhododendron spp.

#### Boxwood

Buxus spp.

## Crabapple

Malus spp.

## Zuonymus

Euonymus spp.

## Fir

Abies spp.

Pseudotsuga spp.

## Jojoba

Simmondsia chinensis

#### Hollies

Ilex spp.

Lilac

Syringa spp.

Magnolia

Magnolia spp.

Maple

Acer spp.

Oak

Quercus spp.

Privet

Liqustrum spp.

Pine

Pinus spp.

Spruce

Picea spp.

Yev

Taxus spp.

— SILVICULTURAL SITES—and — RICHTS—OF—WAY

NOTE: NOT RECOMMENDED FOR USE AS AN OVER-THE-TOP BROADCAST SPRAY - IN SILVICULTURAL NURSERIES.

When applied as directed for ''NONCROP USES'! under conditions described, this product controls undesirable vegetation listed on this label. This product also suppresses or controls undesirable vegetation listed on this label when applied at recommended rates for release of cotablished coniferous species listed on this label.

For opecific rates of application and instructions for control of various brush, annual and perennial weeds, see the ""WEEDE CONTROLLED" section of this label. For specific rates of application for release of listed coniferous species, see the ""CONIFER RELEASE" part of this section of the label.

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

Actial Application—This product may be applied using actial openy equipment for silvicultural site preparation, conifer release and rights-of-way treatments. See the 'APPLICATION EQUIPMENT AND TECHNIQUES' part of the 'MIXING, ADDITIVES AND APPLICATION INSTRUCTIONS' section of this label for information on how to apply this product by air.

DO NOT APPLY THIS PRODUCT BY AIR TO RICHTS OF WAY SITES IN THE STATE OF CALIFORNIA.

To reduce the aerial application drift hazard to aquatic sites\*, to nontarget sites, or any site containing desirable vegetation, always maintain appropriate buffer zones. A buffer zone of the following minimum distances should be maintained:

- --- Helicoptore-woing-a Microfoil<sup>TM</sup> boom, a Thru Valve<sup>TM</sup> boom (TVB-45), or equivalent drift centrel systems, should maintain at least a 50-feet buffer sone.
- \*- When woing other acrial equipment:
- 1. Maintain at least a 75-foot buffer some for applications using 2 quarts or less per acre of this product.
- 2. Maintain at least a 125-foot buffer some for applications using more than 2 quarts per agre of this product.
- 3. Maintain at least a 400-foot buffer none for applications on rights of way when applied from 75 feet or more above ground level.

These distances should be increased if conditions favoring drift exist.

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

#### - SITE PREPARATION #

Following preplant applications of this product, any oilvicultural opecies may be planted.

## # POSTDIRECTED SPRAY-

In established silvicultural sites, use as a spray on the foliage of undesirable vegetation. Care must be exercised to avoid contact of spray, drift or mist with foliage or green bark of desirable species.

#### CONIFER RELEASE ----

For release, apply only where conifers have been cotablished for more than lyear. Vegetation should not be disturbed prior to treatment or until visual symptoms appear after treatment. Symptoms of treatment are slow to appear, copecially in woody openies treated in late fall. Injury may occur to conifers treated for release, especially where openy patterns overlap or the higher rates are applied or when applications are made during periods of active conifer growth.

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

# For release of the following conifer species:

## Douglas fir

- Pseudotsuga menziesii

#### Zi-

--- Abies spp.

#### Henlock

- Fouga opp.

#### Pincet

-Pinus spp.

## Spruce

<del>-Picea spp.</del>

\* Includes all opecies except eastern white pine, loblolly pine or slash pine.

Apply 1.5 to 2 quarts of this product per acre except in Washington and Oregon, west of the crest of the Cascade Mountains. For spring treatments west of the crest of the Cascade Mountains, apply 1 quart of this product per acre before conifer bud swell for control of annual weeds. For fall treatments in Washington and Oregon, west of the crest of the Cascade Mountains, apply 1 to 1.5 quarts of this product per acre before any major leaf drop of deciduous species.

For release of-western hemlock, apply 1 quart of this product per acre-

For release of the following conifer species:

## Loblolly pine

- Pinus taeda

#### Eastern white pine

--- Pinus strobus

## 6lach pine

-Pinus elliottii

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

#### Ash

<del>---Fraxinus-spp.</del>

<del>Cherry:</del> — <del>Blac</del> k
— Prunus-serot: na
Pin
- Prunus pensylvanica
<del>Zlm</del> — <del>Ulmus opp. —</del>
<del>Hawthern</del> — <del>Cratacgus opp.</del>
<del>Locust, black</del> — <del>Robina pseudoacasia</del>
<del>Maple, red</del> — <del>Acer rubra</del>
<del>Oak:</del> 
<del>- Post</del> Quereus stellata
<del>- White</del> <del>Quercus alba</del>
<del>Persimmon</del> ——Diospyros—spp.
Poplar, yellow - Liriodendron tulipfera
<del>Sassafras</del> — <del>Sassafras albidum</del>
<del>Sourwood</del> — <del>Охуdendrum arboreum</del>
Sumao: — Poison — Rhus-vernix
—— <del>Smooth</del> ——— <del>Rhuo glabra</del>
— <del>Winged</del> —— <del>Rhuo copallina</del>
<del>Gweetgum</del> — <del>Liquidambar otyraciflua</del>

46

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

■ Protocol-plus Oust Tank Histores ■

for Conifer Release from Berbaceous Weeds

To release loblelly pines from herbacous weeds, tank mixtures of this product with Gust will provide centrel of annual woods listed in the ''WEEDS CONTROLLED'' section of this and the Gust label, and partial control of the perennial woods listed below.

Apply 16 to 24 fluid ounces of this product with 2-to 4 ounces of Oust in 10 to 30 gallons of spray solution per acre. Make application to actively growing wouds as a broadcast spray over the top of the young loblolly pines.

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

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

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

## **Bahiagrass**

- Paspalum notatum

#### Broomsedge

- Andropogon virginicus

#### Dock, curly

- Rumex crispus

## Dogfennel

--- Supatorium capilliforium

#### Fescue, tall

-- Festuca-arundinacea

#### Johnsongrass\*

- Sorghum halepense

## Poorjoe\*

— <del>Diodia-teres</del>

#### Truspetcreeper\*\*

<del>-- Campsis radicans</del>

#### **Vaseygrass**

·- Paspalum urvillei

# Vervain, blue --- Verbena hastata

-\*Gontrol-at-the higher-rates.

\*\*Suppression-at-the-higher rates-only.

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

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

NOTE TO USER

This product must not be used in areas where adverse impact on Federally designated endangered/threatened plant or aquatic species is likely.

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

#### ■ CUT STUMP TREATMENTS

Woody vegetation may be controlled by treating freshly cut stumps of trees and resprouts with this product. Apply this product using suitable equipment to ensure coverage of the entire cambium. Cut vegetation close to the soil surface. Apply a 50 to 100 percent solution of this product to the freshly cut surface immediately after cutting. Delays in application may result in reduced performance. For best results, applications should be made during periods of active growth and full leaf expansion.

DO NOT MAKE CUT STUMP APPLICATIONS WHEN THE ROOTS OF DESIRABLE WOODY BRUSH OR TREES MAY BE GRAFTED TO THE ROOTS OF THE CUT STUMP. INJURY RESULTING FROM ROOT GRAFTING MAY OCCUR IN ADJACENT WOODY BRUSH OR TREES.

When used according to directions for cut stump application, this product will CONTROL, PARTIALLY CONTROL or SUPPRESS many types of woody brush and tree species, some of which are listed below:

Alder

Alnus spp.

Eucalyptus

Eucalyptus spp.

Madrone

Arbutus menziesii

Oak

Quercus spp.

Reed, glant

48

Arundo donax

Saltcedar

Tamarisk spp.

Sweetgum

Liquidambar styraciflua

Tan Oak

Lithocarpus densiflorus

Willow

Salix spp.

# INJECTION AND FRILLS APPLICATIONS

Woody vegetation may be controlled by injection or frill application of this product. Apply this product using suitable equipment which must penetrate into the living tissue. Apply the equivalent of 1 ml of this product per each 2 to 3 inches of trunk diameter (DBH). This is best achieved by applying a 50 to 100 percent concentration of this material either to a continuous frill around the tree or as cuts evenly spaced around the tree below all branches. As tree diameter increases in size, better results are achieved by applying diluted material to a continuous frill or more closely spaced cuttings. Avoid application techniques that allow runoff to occur from frill or cut areas in species that exude sap freely after frills or cutting. In species such as this, make frill or cut at an oblique angle so as to produce a cupping effect and use undiluted material. For best results, application should be made during periods of active growth and after full leaf expansion.

This treatment will control the following woody species:

Oak

Quercus spp.

Poplar

Populus spp.

Sweetqua

Liquidambar styraciflua

Sycamore

Platanus occidentalis

This treatment will suppress the following woody species:

Black gum

Nyssa sylvatica

Dogwood

Cornus spp.

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Hickory
Carya spp.

Maple, red Acer rubrum

TURFGRASSES AND GRASSES FOR SEED PRODUCTION

#### PREPLANT AND RENOVATION

When applied as directed for ''NONCROP USES'', under conditions described, this product controls most existing vegetation prior to the planting or renovation of either turfgrasses or grass seed production areas.

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

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

DO NOT DISTURB SOIL OR UNDERGROUND PLANT PARTS BEFORE TREATMENT. Tillage or renovation techniques such as vertical mowing, coring or slicing should be delayed for 7 days after application to allow proper translocation into underground plant parts.

# TURFGRASSES

Where existing vegetation is growing in a field or unmowed situation, apply this product to actively growing weeds at the stages of growth listed in the ''WEEDS CONTROLLED'' section of this label.

Where existing vegetation is growing under mowed turfgrass management, apply this product after omitting at least one regular mowing to allow sufficient growth for good interception of the spray.

Desirable turfgrasses may be planted following the above procedures.

## GRASSES FOR SEED PRODUCTION

Apply this product to actively growing weeds at the stages of growth recommended in the ''WEŁDS CONTROLLED'' section of this label prior to planting or renovation of turf or forage grass areas grown for seed production.

DO NOT feed or graze treated areas within 8 weeks after application.

ANNUAL WEED CONTROL IN DORMANT BERMUDAGRASS
AND BAHLAGRASS TURF

SELECTION OF THE SELECT

When applied as directed for ''NONCROP USES'' under the conditions described, this product will provide control or suppression of many winter annual weeds and tall fescue for effective release of dormant bermudagrass and bahiagrass turf. Refer to the rate table for this product alone under the ''RELEASE OF BERMUDAGRASS AND BAHIAGRASS'' section of this label for recommended rates and volumes on the species to be suppressed or controlled. Treat only when turf is dormant and prior to spring greenup. Spot treatments or broadcast applications of this product in excess of 16 fluid ounces per acre may result in injury or delayed greenup in highly maintained turfgrass areas; i.e., golf courses, lawns, etc. DO NOT APPLY TANK ":XTURES of this product plus Oust in highly maintained turfgrass areas.

# RELEASE OF BERMUDAGRASS OR BAHLAGRASS

NOTE: Use only in areas where bermudagrass or bahiagrass are desirable groundcovers and where some temporary injury or discoloration can be tolerated. Use tank mixtures of this product plus Oust only on railroads, highways, utility plant sites, or other rights-of-way areas.

When applied as directed for ''NONCROP USES'' under the conditions described, this product will provide control or suppression of many winter annual weeds and tall fescue for effective release of dormant bermudagrass or bahiagrass. This product may be tank-mixed with Oust as recommended for residual control. Make applications to dormant bermudagrass or bahiagrass. Tank mixtures of this product plus Oust may delay greenup. To avoid delays in greenup and minimize injury, do not add more than 1 ounce per acre of Oust on bermudagrass or more than 0.5 ounce per acre on bahiagrass, or treat when these grasses are in a semi-dormant condition.

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

# WEEDS CONTROLLED

Rate recommendations for control or suppression of winter annuals and tall fescue are listed below:

Apply the recommended rates of this product alone or as a tank mixture in 10 to 25 gallons of total spray volume per acre.

# WEEDS CONTROLLED OR SUPPRESSED WITH PROTOCOL ALONE\*

NOTE: C

C = Control

S = Suppression

PROTOCOL FLUID OZ/ACRE

WEED SPECIES		12	16	24	32	64
Barley, little Hordeum pusilium	S	С	С	С	С	С
Bedstraw, catchweed Galium aparine	S	С	С	С	С	С
Bluegrass, annual Poa annua	S	С	С	C .	С	С
Chervil Chaerophyllum tainturieri	- <b>S</b>	С	С	С	С	С
Chickweed, common Stellaria media	S	С	С	C	С	С
Clover, crimson Trifolium incarnatum	•	S	5	С	С	С
Clover, large hop Trifolium campestre	•	S	s	С	С	С
Fescue, tall Festuca arundinaceae	•	•	•	•	S	s
Geranium, Carolina Geranium carolinianum	•	•	s	S	С	С
Henbit Lamium amplexicaule	•	S	С	С	С	С
Ryegrass, Italian Lolium multiflorum	•	•	s	С	С	С
Speedwell, corn Veronica arvensis	s	С	С	С	С	С
Vetch, common  Vicia sativa	•	•	s	С	С	С

These rates apply only to sites where an established competitive turf is present.

# WEEDS CONTROLLED OR SUPPRESSED WITH PROTOCOL PLUS OUST\*

NOTE:

C - Control

S = Suppression

PROTOCOL + OUST

PROTOCOL (FL. UE/A) 8 12 12 16 16 12 16

SECTION AND SERVICE AND A SECTION ASSESSMENT ASSESSMENT

WEED SPECIES	+ OUST (OE/A)	+ ¥	+ 4	+	+	+	+ 1	+ 1	
Barley, little Hordeum pusilium		С	С	С	С	С	С	С	
Bedstraw, catchweed Galium aparine		С	С	С	С	С	С	С	
Bluegrass, annual Pos annua		S	С	С	С	С	С	С	
Chervil Chaerophyllum taintur	ieri	С	С	С	С	С	С	С	
Chickweed, common Stellaria media		S	С	С	С	С	С	С	
Clover, crimson Trifolium incarnatum		S	s	S	s	С	С	С	
Clover, large hop Trifolium campestre		•	•	s	s	S	С	С	
Fescue, tall Festuca arundinaceae		•	•	•	•	•	s	s	
Geranium, Carolina Geranium carolinianum		e	s	s	С	С	С	С	
Henbit Lamium amplexicaule		•	s	С	С	С	С	С	
Ryegrass, Italian Lolium multiflorum		•	S	s	С	С	С	С	
Speedwell. corn Veronica arvensis		s	С	С	с	С	С	C	
Vetch, common Vicia sativa		С	С	C	С	С	С	С	

These rates or mixtures of rates apply only to sites where an established competitive turf is present.

# RELEASE OF ACTIVELY GROWING BERMUDAGRASS

When applied as directed, this product will aid in the release of bermudagrass by providing control of annual species listed in the ''WEEDS CONTROLLED'' section of this and the Oust label, and suppression or partial control of certain perennial weeds.

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

Use the higher rate of this product for partial control of the following perennial species. Use the lower rates for suppression of growth. For best results, see the ''WEEDS CONTROLLED'' section of this label for proper stage of growth.

## Bahiagrass

Paspalum notatum

Bluestem, silver
Andropogon saccharoides

Fescue, tall
Festuca arundinacea

Johnsongrass\*
Sorghum halepense

Trumpetcreeper\*\*
Campsis radicans

## Vaseygrass

Paspalum urvillei

- \* Control at the higher rates.
- \*\* Suppression at higher rates only.

This product may be tank-mixed with Oust. If tank-mixed, use no more than 1 to 2 pints of this product per acre with 1 to 2 ounces of Oust per acre.

Use the lower rates of both products to control annual weeds less than 6 inches in height (or runner length in annual vines) that are listed in the 'WEEDS CONTROLLED' section of this booklet and the Oust label. Use the higher rates as annual weeds increase in size and approach the flower or seedhead stages.

Use the higher rates of this product to provide partial control of the following perennial weeds. Use the lower rates for suppression of growth.

#### Bahiagras.

Paspalum notatum

Bluestem, silver

Andropogon saccharoides

# Broomsedge

Andropogon virginicus

Dock, curly Rumex crispus Dogfennel
Eupatorium capilliforium

Fescue, tall Festuca arundinacea

Johnsongrass\*
Sorghum halepense

Poorjoe\*\*
Diodia teres

Trumpetcreeper\*
Campsis radicans

Vaseygrass Paspalum urvillei

Vervain, blue Verbena hastata

\*Suppression at higher rates only.

\*\*Control at the higher rates.

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

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

## COOL SEASON TURF GROWTH REGULATION

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

This product is recommended for management of coarse turf on roadside rights-of-way or other industrial areas where some turf discoloration can be tolerated. The turf will regrow under moist conditions as effects of this product wear off. Do not use on high-quality turf.

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

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

## Tall Fescue Smooth Brome

For best results, apply this product in a recommended tank mixture to actively growing turfgrasses after greenup in the spring of the year. For suppression of seedheads, applications must be made before boot-to-seedhead stage of development. Applications made from seedhead emergence until maturity may result in turf discoloration or injury.

After mowing or removal of seedheads, this product in a recommended tank mixture may also be used to suppress the growth of certain surfgrasses. Allow turf to recover from stress caused by heat, drought or mowing before making applications. Applications made to turf under stress may increase the potential for discoloration or injury.

## ANNUAL GRASSES

For growth suppression of some annual grasses such as annual ryegrass, wild barley and wild oats, apply 3 to 4 fluid ounces of this product in 10 to 40 gallons of spray solution per acre. Applications should be made when annual grasses are actively growing and before the seedheads are in the boot stage of development. Treatments made after seedhead emergence may cause injury to the desired grasses.

#### TANK MIXTURES

For the following tank mixtures, consult each product label for weeds controlled and the correct stage of application. Do not treat turf under stress.

## Tank mixtures plus 2,4-D

For additional weed control benefits, up to 1 pound a.i. per acre of 2,4-D may be added to the following tank mixtures. Consult the label for 2,4-D for weeds controlled.

## TALL FESCUE

## Protocol plus Telar™

For suppression of tall fescue growth and seedheads, and control or partial control of some annual weeds, apply this tank mixture after greenup and prior to boot-to-seedhead stage of development. Use up to 0.5 ounce of Telar per acre.

This tank mixture can also be applied after mowing or removal of tall fescue seedheads for turf growth suppression. Make only one of the above applications per growing season.

# Protocol plus Oust

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

## Protocol plus Escort™

This tank mixture can be applied after mowing or removal of tall fescue seedheads for turf growth suppression and control or partial control of some annual weeds. Use up to 1/3 ounce of Escort per acre.

NOTE: This product is not registered for use with Escort in California.

## SHOOTH BROME

## Protocol plus Oust

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

# BAHIAGRASS SEEDHEAD AND VEGETATIVE SUPPRESSION

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

Apply this product 1 to 2 weeks after full greenup of bahiagrass or after the bahiagrass has been moved to a uniform height of 3 to 4 inches. Applications must be made prior to seedhead emergence. Apply 6 fluid ounces per acre of this product in 10 to 25 gallons of water per acre.

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

A tank mixture of this product plus Oust may be applied only on roadsides for seedhead inhibition and vegetative suppression. Apply 6 fluid ounces of this product per acre plus 0.25 ounce per acre of Oust, 1 to 2 weeks following an initial spring mowing. When using this product plus Oust for suppression of bahiagrass, make only 1 application per year.

## CROPPING SYSTEMS

When applied as directed for "CROPPING SYSTEMS", under the conditions described, this product controls annual and perennial weeds listed on this label, prior to the emergence of direct seeded crops or prior to transplanting of crops listed on this label.

See the ''GENERAL INFORMATION'' and ''MIXING, ADDITIVES AND APPLICATION INSTRUCTIONS'' sections of this label for essential product performance information.

EXTREME CARE MUST BE EXERCISED TO AVOID CONTACT OF SPRAY WITH FOLIAGE, GREEN STEMS OR FRUIT OF DESIRABLE CROPS, PLANTS, TREES OR OTHER DESIRABLE VEGETATION SINCE SEVERE DAMAGE OR DESTRUCTION MAY RESULT.

Repeat treatments may be necessary to control weeds regenerating from underground parts or seed. Except as otherwise specified on this label, repeat treatments must be made before the crop emerges in accordance with the instructions of this label.

Except as otherwise specified in a crop section of this label, the combined total of all treatments must not exceed 8 quarts per acre of this product per year.

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

For any crop not listed below, applications must be made at least 30 days prior to planting.

Do not harvest or feed treated vegetation for 8 weeks following application. Following spot treatment or selective equipment use, allow 14 days before grazing domestic livestock or harvesting forage grasses and legumes.

## ROW CROPS

CORN (ALL)\*
COTTON\*
PEANUTS
SORGHUM (MILO)\*
SOYBEANS\*
SUGAR CANE\*

## CEREAL GRAINS

BARLEY\*
BUCKWHEAT\*
MILLET (PEARL, PROSO)\*
OATS\*
RICE\*\*
RYE\*
TRITICALE\*
WHEAT (ALL)\*
WILD RICE\*

# CITRUS

CALAMONDIN
CHIRONJA
CITRON
GRAPEFRUIT
KUMQUAT
LEMON
LIME
MANDARIN ORANGE
ORANGE (ALL)
PUMMELO
TANGELO
TANGERINE
TANGORS

# TREE NUTS

ALMOND
BEECHNUT
BRAZIL NUT
BUTTERNUT
CASHEW
CHESTNUT
CHINQUAPIN
FILBERT (HAZELNUT)
HICKORY NUT
MACADAMIA
PECAN
PISTACHIO
WALNUT (BLACK, ENGLISH)

## VINE CROPS

GRAPES KIWI FRUIT

## TREE FRUITS

APPLE
APRICOTS
CHERRY (SWEET, SOUR)
LOQUAT
MAYHAW
NECTARINE
OLIVE
PEACH
PEAR
PLUM/PRUNE (ALL)
QUINCE

## **VEGETABLES**

AMARANTH

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ARRUGULA
ARTICHOKE, JERUSALEM
ASPARAGUS*
BEANS (ALL)
BEET GREENS
BEETS (RED, SUGAR)
BROCCOLI (ALL)
BRUSSELS SPROUTS
CABBAGE (ALL)
CABBAGE, CHINESE
CANTALOUPE***
CARROT
CAULIFLOWER
CASABA MELON***
CELERIAC
CELERY
CELTUCE
CHARD, SWISS
CHERVIL
CHICORY
CHRYSANTHEMUM
COLLARDS
CORN SALAD
CRENSHAW MELON***
CRESS
CUCUMBER***
DANDELION
DOCK (sorrel)
EGGPLANT***
ENDIVE
FENNEL (florence)
GARLIC***
GERKIN
GOURDS***
GROUND CHERRY***
GUAR
HONEYDEW MELON***
HONEY BALL MELON***
HORSERADISH
KALE
KOHLRABI
LEEK
LENTILS
LETTUCE
MANGO MELON***
MELONS (ALL) ***
MUSKMELON***
MUSTARD GREENS
OKRA
ONION
PARSLEY
PARSNIPS
PEAS (ALL)
PEPINOS
PEPPER (ALL) ***
FERSIAN MELON***
POTATO (IRISH, SWEET)
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4

PUMPKIN\*\*\*

PURSLANE

RADISH

RAPE GREENS

RHUBARB

RUTABAGA

SALSIFY

SHALLOT

SPINACH (ALL)

SQUASH (SUMMER, WINTER) \*\*\*

TOMATILLO\*\*\*

TOMATO\*\*\*†

TURNIP

WATERCRESS\*\*\*

WATERMELON\*\*\*

YAMS

# SMALL FRUITS AND BERRIES

BLACKBERRY

BLUEBERRY

BOYSENBERRY

CRANBERRY

CURRANT

**DEWBERRY** 

SIDERBERRY

**GOOSEBERRY** 

HUCKLEBERRY

LOGANBERRY

**OLALLIEBERRY** 

RASPBERRY (BLACK, RED)

## FORAGE CROPS AND LEGUMES

ALFALFA\*

FORAGE GRASSES\*

FORAGE LEGUMES\*

# TROPICAL CROPS

ACEROLA

ATEMOYA

**AVOCADO** 

BANANA (PLANTAINS)

BREADFRUIT

CANISTEL

CARAMBOLA

CHERIMOYA

COCOA BEANS

COCONUTS COFFEE

DATES

FIGS

GENIP

**GUAVA JABOTICABA JACKFRUIT** LONGAN LYCHEE MANGO PAPAYA PASSION FRUIT **PERSIMMONS** PINEAPPLE\*\*\*\* **POMEGRANATE** SAPODILLA SAPOTE (BLACK, MAMEY, WHITE) SOURSOP SUGAR APPLE TAMARIND

TEA

- \* Spot treatments may be applied in these crops.
- \*\* Do not treat rice fields or levees when the fields contain flood water.
- \*\*\* Apply only prior to planting. Allow at least 3 days between application and planting.
- \*\*\*\* Do not feed or graze treated pineapple forage following application.
  - t Use is restricted to direct seeded crops only.

When applying this product prior to transplanting crops into plastic mulch, care must be taken to remove residues of this product from the plastic prior to transplanting. Residues can be removed by  $\frac{1}{2}$  0.5 inch natural rainfall or by applying water via a sprinkler irrigation system.

Spot Treatment (Only those crops with "\*" can be spot treated) — Applications in growing crops must be made prior to heading of small grains and milo, initial pod set in soybeans, silking of corn, or boll opening on cotton.

For forage grasses and forage legumes, see ''SPOT TREATMENT'' in the ''PASTURES'' section of ''CROPPING SYSTEMS'' in this label.

For dilution and rates of application using boom or hand-held equipment, see the ''MIXING, ADDITIVES AND APPLICATION INSTRUCTIONS'' and ''WEEDS CONTROLLED'' sections of this label.

NOTE: FOR FORAGE GRASSES AND FORAGE LEGUMES, NO MORE THAN ONE-TENTH OF ANY ACRE SHOULD BE TREATED AT ONE TIME. FOR ALL OTHER CROPS, DO NOT TREAT MORE THAN 10 PERCENT OF THE TOTAL FIELD AREA TO BE HARVESTED.

THE CROP RECEIVING SPRAY IN TREATED AREA WILL BE KILLED. TAKE CARE TO AVOID DRIFT OR SPRAY OUTSIDE TARGET AREA FOR THE SAME REASON.