

AUG 16 1995

Ms. Lydia A. Suba
Monsanto Company
700 14th Street, N.W., Suite #1100
Washington, DC 20005

Dear Ms. Suba:

Subject: MON 55005 Herbicide (Addition of Brand Name for Non-Crop Areas)
EPA Registration No. 524-475
Your Application Routed June 28, 1995

The additional brand name: "Roundup PRO Herbicide" is acceptable and our records have been modified accordingly.

The labeling referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended is acceptable. Please submit five (5) copies of your final printed labeling before you release the product for shipment. A stamped copy of labeling is enclosed for your records.

Sincerely,

Robert J. Taylor
Product Manager 25
Fungicide-Herbicide Branch
Registration Division (7505C)

CONCURRENCES

SYMBOL	73055						
SURNAME	V. W. Taylor						
DATE	8/15/95						

1 of 27

Roundup® PRO
Herbicide by Monsanto

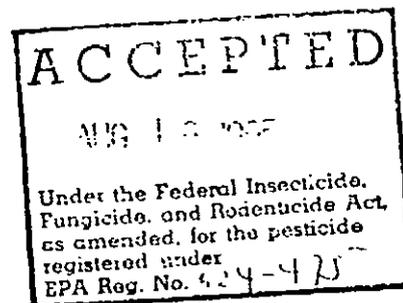
The complete broadspectrum postemergence professional herbicide for industrial, turf and ornamental weed control.

Complete Directions for Use

EPA Reg. No. 524-475

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

1995-1



Read the entire label before using this product.

Use only according to label instructions.

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

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

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

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1.0 INGREDIENTS

ACTIVE INGREDIENT:

*Glyphosate, N-(phosphonomethyl)
 glycine, in the form of its isopropylamine salt..... 41.0%

INERT INGREDIENTS (including surfactant):..... 59.0%
 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.

This product is protected by U.S. Patent No. 4,405,531. Other patents pending. No license granted under any non-U.S. patent(s).

2.0 IMPORTANT PHONE NUMBERS

1. FOR PRODUCT INFORMATION OR ASSISTANCE IN USING THIS PRODUCT,
 CALL TOLL-FREE,
 1-800-332-3111

2. IN CASE OF AN EMERGENCY INVOLVING THIS PRODUCT, OR FOR MEDICAL
 ASSISTANCE, CALL COLLECT, DAY OR NIGHT,
 1-(314)-694-4000

3.0 PRECAUTIONARY STATEMENTS

3.1 Hazards to Humans and Domestic Animals

Keep out of reach of children.

CAUTION!

HARMFUL IF INHALED.
 CAUSES EYE IRRITATION

Avoid contact with eyes or clothing

Avoid breathing vapor or spray mist.

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FIRST AID: **IF INHALED**, remove victim to fresh air. If not breathing, give artificial respiration, preferably mouth-to-mouth. Get medical attention.

IF IN EYES, flush with plenty of water. Get medical attention if irritation persists.

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

Personal Protective Equipment (PPE)

Applicators and other handlers must wear long-sleeved shirt and long pants, shoes plus socks. Follow manufacturer's instructions for cleaning/maintaining PPE (Personal Protective Equipment). If there are no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

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

User Safety Recommendations:

Users should:

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

3.2 Environmental Hazards

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

3.3 Physical or Chemical Hazards

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

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

DIRECTIONS FOR USE

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

Agricultural Use Requirements

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

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application.

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

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is: coveralls, waterproof gloves, 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 to prevent transfer of this product onto desirable vegetation.

4.0 STORAGE AND DISPOSAL

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

See container label for STORAGE AND DISPOSAL instructions.

5.0 GENERAL INFORMATION

Product Description: This product is a postemergent, systemic herbicide with no soil residual activity. It gives broad spectrum control of many annual weeds, perennial weeds, woody brush and trees. It is formulated as a water-soluble liquid containing surfactant and no additional surfactant is needed or recommended.

Environmental Fate: When this product comes in contact with the soil it is bound to soil particles. When used in accordance with label directions, once this product is bound it is not available for plant uptake and will not harm off-site vegetation where roots grow into the treatment area or if the soil is transported off-site. The strong affinity of this product to soil particles prevents this product from leaching out of the soil profile and entering ground water. The affinity between this product and soil particles remains until this product is degraded, which is primarily a biological degradation process carried out under both aerobic and anaerobic conditions by soil microflora.

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

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

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

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

Tank Mixing: This product does not provide residual weed control. For subsequent residual weed control, follow a label-approved herbicide

program. Read and carefully observe the cautionary statements and all other information appearing on the labels of all herbicides used. Use according to the most restrictive label directions for each product in the mixture.

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

Annual Maximum Use Rate: The combined total of all treatments must not exceed 10.6 quarts of this product per acre per year.

ATTENTION

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

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 miles per hour 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.

6.0 MIXING

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

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

6.1 Mixing with Water

This product mixes readily with water. Mix spray solutions of this product as follows: Fill the mixing or spray tank with the required amount of water. Add the recommended amount of this product near the end of the filling process and mix well. 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 anti-foam or defoaming agent.

6.2 Tank Mixing Procedure

When tank mixing, read and carefully observe the label claims, cautionary statements and all information on the labels of all products used. Add the tank mix product to the tank as directed by the label. Maintain agitation and add the recommended amount of this product.

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

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

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

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

6.3 Mixing for Hand-held Sprayers

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

<u>Spray Solution</u>	Amount of Roundup® PRO					
	1/2%	1%	1 1/2%	2%	5%	10%
Desired Volume						
1 Gal	2/3 oz	1-1/3 oz	2 oz	2-2/3 oz	6-1/2 oz	13 oz
25 Gal	1 pt	1 qt	1-1/2 qt	2 qt	5 qt	10 qt
100 Gal	2 qt	1 gal	1-1/2 gal	2 gal	5 gal	10 gal

2 tablespoons = 1 fluid ounce

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

6.4 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 dilution. Use colorants or dyes according to the manufacturer's recommendations.

7.0 APPLICATION EQUIPMENT AND TECHNIQUES

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

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

7.1 Aerial Equipment

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

FOR AERIAL APPLICATION IN CALIFORNIA, REFER TO THE FEDERAL SUPPLEMENTAL LABEL FOR AERIAL APPLICATIONS IN THAT STATE FOR SPECIFIC INSTRUCTIONS, RESTRICTIONS AND REQUIREMENTS. This product plus Oust™, Banvel™ or 2,4-D tank mixtures may not be applied by air in California.

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

Avoid direct application to any body of water.

Use the recommended rates of this herbicide in 3 to 25 gallons of water per acre.

Coarse sprays are less likely to drift; therefore, do not use nozzles or nozzle configurations which dispense spray as fine spray droplets. 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.

PROLONGED EXPOSURE OF THIS PRODUCT TO UNCOATED STEEL SURFACES MAY RESULT IN CORROSION AND POSSIBLE FAILURE OF THE PART. The maintenance of an organic coating (paint) which meets aerospace specification MIL-C-38413 may prevent corrosion. To prevent corrosion of exposed parts, thoroughly wash aircraft after each day of spraying to remove residues of this product accumulated during spraying or from spills. Landing gear are most susceptible.

7.2 Ground Broadcast Equipment

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

7.3 Hand-Held and High-Volume Equipment

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

7.4 Selective Equipment

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

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 or hooded applicator directs the herbicide solution onto weeds, while shielding desirable vegetation from the herbicide.

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

AVOID CONTACT OF HERBICIDE WITH DESIRABLE VEGETATION AS SERIOUS INJURY OR DEATH IS LIKELY TO OCCUR.

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

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

Shielded and hooded applicators

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

Wiper applicators and sponge bars

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 applications are made in opposite directions.

Avoid leakage or dripping onto desirable vegetation. Adjust height of applicator to ensure adequate contact with weeds. Keep wiping surfaces

clean. Be aware that, on sloping ground, the herbicide solution may migrate, causing dripping on the lower end and drying of the wicks on the upper end of a wiper applicator.

Do not use wiper equipment when weeds are wet.

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

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

For Porous-Plastic Applicators and pressure-feed systems--Solutions ranging from 33 to 100 percent of this product in water may be used.

When applied as recommended, this product CONTROLS the following weeds:

Corn, volunteer	Sicklepod
Panicum, Texas	Spanishneedles
Rye, common	Starbur, bristly
Shattercane	

When applied as recommended, this product SUPPRESSES the following weeds:

Beggarweed, Florida	Ragweed, common
Bermudagrass	Ragweed, giant
Dogbane, hemp	Smutgrass
Dogfennel	Sunflower
Guineagrass	Thistle, Canada
Johnsongrass	Thistle, musk
Milkweed	Vaseygrass
Nightshade, silverleaf	Velvetleaf
Pigweed, redroot	

7.5 Injection Systems

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

7.6 CDA Equipment

The rate of this product applied per acre by controlled application equipment (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.

CDA 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 is likely to result.

8.0 SITE AND USE RECOMMENDATIONS

Detailed instructions follow alphabetically, by site.

Unless otherwise specified, applications may be made to control any weeds listed in the annual, perennial and woody brush tables. Refer also to the "SELECTIVE EQUIPMENT" section.

8.1 Cut Stumps

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

Alder	Saltcedar
Eucalyptus	Sweetgum
Madrone	Tan oak
Oak	Willow
Reed, giant	

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 IS LIKELY TO OCCUR IN ADJACENT WOODY BRUSH OR TREES.

8.2 General Noncrop Areas and Industrial Sites

Use in areas such as airports, apartment complexes, Christmas tree farms, ditch banks, dry ditches, dry canals, fencerows, golf courses, industrial sites, lumber yards, manufacturing sites, office complexes, ornamental nurseries, parks, parking areas, petroleum tank farms and pumping installations, railroads, recreational areas, residential areas, roadsides, schools, storage areas, utility substations, warehouse areas, other public areas, and similar industrial and noncrop sites.

General weed control, Trim-and-edge and Bareground

This product may be used in general noncrop areas. It may be applied with any application equipment described in this label. This product may be used to trim-and-edge around objects in noncrop sites, for spot treatment of unwanted vegetation and to eliminate unwanted weeds growing in established shrub beds or ornamental plantings. This product may be used prior to planting an area to ornamentals, flowers, turfgrass (sod or seed), or prior to laying asphalt or beginning construction projects.

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

This product may be tank mixed with the following products. Refer to these products' labels for approved noncrop sites and application rates.

ARSENAL™	SIMAZINE
BANVEL	SIMAZINE 4L
DIURON	SIMAZINE 80W

KROVAR™ I	SURFLAN™ 75W
KROVAR II	SURFLAN AS
OUST	TELAR™
PRINCEP™ CALIBER™ 90	2,4-D
RONSTAR™ 50WP	ESCORT™

Oust tank mixtures may not be applied by air in California.
This product is not registered for use with Escort in California.

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

For control or partial control of the following perennial weeds, apply 1 to 2 quarts of this product plus 2 to 4 ounces of Oust per acre.

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

Chemical mowing

This product will suppress perennial grasses listed in this section to serve as a substitute for mowing. Use 8 fluid ounces of this product per acre when treating tall fescue, fine fescue, orchardgrass or quackgrass covers. Use 6 fluid ounces of this product per acre when treating Kentucky bluegrass. Apply treatments in 10 to 20 gallons of spray solution per acre.

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

Dormant turfgrass

This product may be used to control or suppress many winter annual weeds and tall fescue for effective release of dormant bermudagrass and bahiagrass turf. Refer to the "ROADSIDES" section of this label, which gives rates for dormant bermudagrass and bahiagrass treatments. Treat only when turf is dormant and prior to spring greenup.

Treatments in excess of 16 fluid ounces per acre may result in injury or delayed greenup in highly maintained areas, such as golf courses and lawns. DO NOT apply tank mixtures of this product plus Oust in highly maintained turfgrass areas.

Turfgrass renovation

This product controls most existing vegetation prior to renovating turfgrass areas. 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 the best control. Where existing vegetation is growing under mowed turfgrass

management, apply this product after omitting at least one regular mowing to allow sufficient growth for good interception of the spray.

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

8.3 Habitat Management

Habitat restoration and management

This product may be used to control exotic and other undesirable vegetation in habitat management and natural areas, including rangeland and wildlife refuges. Applications can be made to allow recovery of native plant species, prior to planting desirable native species, and for similar broadspectrum vegetation control requirements. Spot treatments can be made to selectively remove unwanted plants for habitat management and enhancement.

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 application before tillage to allow translocation into underground plant parts.

8.4 Injection and Frill (Woody Brush and Trees)

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

<u>Control</u>	<u>Partial control</u>
Oak	Black gum
Poplar	Dogwood
Sweetgum	Hickory
Sycamore	Maple, red

8.5 Ornamentals and Plant Nurseries, Christmas Trees

Post-directed, Trim-and-edge

This product may be used as a post-directed spray around established woody ornamental species such as arborvitae, azalea, boxwood, crabapple, euonymus, fir, douglas fir, jojoba, hollies, lilac, magnolia, maple, oak, privet, pine, spruce and yew. This product may also be used to trim and edge around trees, buildings, sidewalks and roads, potted plants and other objects in a nursery setting.

Desirable plants may be protected from the spray solution by using shields or coverings made of cardboard or other impermeable material. THIS PRODUCT IS NOT RECOMMENDED FOR USE AS AN OVER-THE-TOP BROADCAST SPRAY IN ORNAMENTALS AND CHRISTMAS TREES. Care must be exercised to avoid contact of spray, drift or mist with foliage or green bark of established ornamental species.

Site preparation

This product may be used prior to planting any ornamental, nursery or Christmas tree species.

Greenhouse/Shadehouse

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

8.6 Parks, Recreational and Residential Areas

This product may be used in parks, recreational and residential areas. It may be applied with any application equipment described in this label. This product may be used to trim-and-edge around trees, fences, paths, around buildings, sidewalks, and other objects in these areas. This product may be used for spot treatment of unwanted vegetation. This product may be used to eliminate unwanted weeds growing in established shrub beds or ornamental plantings. This product may be used prior to planting an area to ornamentals, flowers, turfgrass (sod or seed), or prior to laying asphalt or beginning construction projects.

All of the instructions in the "GENERAL NONCROP AREAS AND INDUSTRIAL SITES" section apply to park and recreational areas.

8.7 Railroads

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

Bare ground, Ballast and Shoulders, Crossings, and Spot treatment

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

ARSENAL
BANVEL

KROVAR
KROVAR II

DIURON	OUST
ESCORT	SPIKE™
GARLON™ 3A	TELAR
GARLON 4	2,4-D
HYVAR™ X	

Brush control

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

ARSENAL	GARLON 4
ESCORT	TORDON™ K
GARLON 3A	

Bermudagrass release

This product may be used to control or partially control many annual and perennial weeds for effective release of actively growing bermudagrass. Apply 1 to 3 pints of this product in up to 80 gallons of spray solution per acre. Use the lower rate when treating annual weeds below 6 inches in height (or runner length). Use the higher rate as weeds increase in size or as they approach flower or seedhead formation. These rates will also provide partial control of the following perennial species:

Bahiagrass	Johnsongrass
Bluestem, silver	Trumpetcreeper
Fescue, tall	Vaseygrass

This product may be tank-mixed with Oust. If tank-mixed, use no more than 1 to 3 pints of this product with 1 to 2 ounces of Oust per acre. Use the lower rates of each product to control annual weeds less than 6 inches in height (or runner length) that are listed in this label and the Oust label. Use the higher rates as annual weeds increase in size and approach the flower or seedhead stages. These rates will also provide partial control of the following perennial weeds:

Bahiagrass	Fescue, tall
Blackberry	Johnsongrass
Bluestem, silver	Poorjoe
Broomsedge	Raspberry
Dewberry	Trumpetcreeper
Dock, curly	Vaseygrass
Dogfennel	Vervain, blue

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 occur.

8.8 Roadsides

All of the instructions in the "GENERAL NONCROP AREAS AND INDUSTRIAL SITES" section apply to roadsides.

Shoulder treatments

This product may be used on road shoulders. It may be applied with boom sprayers, shielded boom sprayers, high-volume off-center nozzles, hand-held equipment, and similar equipment.

Guardrails and other obstacles to mowing

This product may be used to control weeds growing under guardrails and around signposts and other objects along the roadside.

Spot treatment

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

Tank mixtures

This product may be tank-mixed with the following products for shoulder, guardrail, spot and bare ground treatments:

DIURON	PRINCEP CALIBER 90
KROVAR I	SIMAZINE 4L
KROVAR II	SIMAZINE 80W
OUST	SURFLAN 75W
RONSTAR 50WP	SURFLAN AS
SIMAZINE	2,4-D

See the "GENERAL NONCROP AREAS AND INDUSTRIAL SITES" section of this label for general instructions for tank mixing.

Release of Bermudagrass or Bahiagrass

Dormant applications

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

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

Apply 8 to 64 fluid ounces of this product per acre alone or in a tank mixture with 1/4 to 1 ounce per acre of Oust. Apply the recommended rates in 10 to 25 gallons of water per acre. Use only in areas where bermudagrass or bahiagrass are desirable ground covers and where some temporary injury or discoloration can be tolerated. To avoid delays in greenup and minimize injury, add no more than 1 ounce of Oust per acre on bermudagrass and no more than 0.5 ounces of Oust per acre on

bahiagrass and avoid treatments when these grasses are in a semi-dormant condition.

Actively growing bermudagrass

This product may be used to control or partially control many annual and perennial weeds for effective release of actively growing bermudagrass. Apply 1 to 3 pints of this product in 10 to 25 gallons of spray solution per acre. Use the lower rate when treating annual weeds below 6 inches in height (or runner length). Use the higher rate as weeds increase in size or as they approach flower or seedhead formation. These rates will also provide partial control of the following perennial species:

Bahiagrass	Johnsongrass
Bluestem, silver	Trumpet creeper
Fescue, tall	Vaseygrass

This product may be tank-mixed with Oust. If tank-mixed, use no more than 1 to 2 pints of this product with 1 to 2 ounces of Oust per acre. Use the lower rates of each product to control annual weeds less than 6 inches in height (or runner length) that are listed in this label and the Oust label. Use the higher rates as annual weeds increase in size and approach the flower or seedhead stages. These rates will also provide partial control of the following perennial weeds:

Bahiagrass	Johnsongrass
Bluestem, silver	Poorjoe
Broomsedge	Trumpet creeper
Dock, curly	Vaseygrass
Dogfennel	Vervain, blue
Fescue, tall	

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

Actively growing bahiagrass

For suppression of vegetative growth and seedhead inhibition of bahiagrass for approximately 45 days, apply 6 fluid ounces of this product in 10 to 25 gallons of water per acre. Apply 1 to 2 weeks after full green-up or after mowing to a uniform height of 3 to 4 inches. This application must be made prior to seedhead emergence.

For suppression up to 120 days, apply 4 fluid ounces of this product per acre, followed by an application of 2 to 4 fluid ounces per acre about 45 days later. Make no more than 2 applications per year.

A tank mixture of this product plus Oust may be used. Apply 6 fluid ounces of this product plus 0.25 ounces of Oust per acre 1 to 2 weeks following an initial spring mowing. Make only one application per year.

9.0 WEEDS CONTROLLED

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

Reduced results may occur when treating weeds heavily covered with dust. For weeds that have been mowed, grazed or cut, allow regrowth to occur prior to treatment.

Refer to the following label sections for recommended rates for the control of annual and perennial weeds and woody brush and trees. For difficult to control perennial weeds and woody brush and trees, where plants are growing under stressed conditions, or where infestations are dense, this product may be used at 5 to 10 quarts per acre for enhanced results.

9.1 Annual Weeds

Use 1 quart per acre if weeds are less than 6 inches in height or runner length and 1.5 quarts per acre if weeds are over 6 inches in height or runner length or when weeds are growing under stressed conditions.

For spray-to-wet applications, apply a 0.5 percent solution of this product to weeds less than 6 inches in height or runner length. Apply prior to seedhead formation in grass or bud formation in broadleaf weeds. For annual weeds over 6 inches tall, for smaller weeds growing under stressed conditions, use a 1 percent solution.

**WEED
SPECIES**

- Annoda, spurred
- Barley*
- Barnyardgrass*
- Bittercress*
- Black nightshade*
- Bluegrass, annual*
- Bluegrass, bulbous*
- Brassica, fivehook
- Brome, downy*
- Brome, Japanese*
- Browntop panicum*
- Buttercup*
- Carolina foxtail*
- Carolina geranium
- Cheat*
- Chervil*
- Chickweed*
- Cocklebur*
- Copperleaf, hophornbeam
- Copperleaf, Virginia
- Corn*
- Corn speedwell*
- Crabgrass*
- Dwarf dandelion*
- Eastern mannagrass*
- Eclipta*
- Fall panicum*
- Falsedandelion*
- Falseflax, smallseed*
- Fiddleneck
- Field pennycress*

Filaree
 Fleabane, annual*
 Fleabane, hairy(*Conyza bonariensis*)*
 Fleabane, rough*
 Florida pusley
 Foxtail*
 Goatgrass, jointed*
 Goosegrass
 Grain sorghum (milo)*
 Groundsel, common*
 Hemp sesbaniaHenbit
 Horseweed/ Marestalk(*Conyza canadensis*)
 Itchgrass*
 Johnsongrass, seedling
 Junglerice
 Knotweed
 Kochia
 Lambsquarters*
 Little barley*
 London rocket*
 Mayweed
 Medusahead*
 Morningglory (*Ipomoea spp.*)
 Mustard, blue*
 Mustard, tansy*
 Mustard, tumble*
 Mustard, wild*
 Oats
 Pigweed*
 Plains/Tickseed coreopsis*
 Prickly lettuce*
 Ragweed, common*
 Ragweed, giant
 Red rice
 Russian thistle
 Rye*
 Ryegrass*
 Sandbur, field*
 Shattercane*
 Sheperdspurse*
 Sicklepod
 Signalgrass, broadleaf*
 Smartweed, ladythumb*
 Smartweed, Pennsylvania*
 Sowthistle, annual
 Spanishneedles
 Speedwell, purslane*
 Sprangletop*
 Spurge, annual
 Spurge, prostrate*
 Spurge, spotted*
 Spurry, umbrella*
 Starthistle, yellow
 Stinkgrass*
 Sunflower*
 Teaweed/ Prickly sida
 Texas panicum*
 Velvetleaf

Virginia pepperweed*
 Wheat*
 Wild oats*
 Witchgrass*
 Woolly cupgrass*
 Yellow rocket

*When using field broadcast equipment (aerial applications or boom sprayers using flat fan nozzles) these species will be controlled or partially controlled using 1 pint of this product per acre. Applications must be made using 3 to 10 gallons of carrier volume per acre. Use nozzles that ensure thorough coverage of foliage and treat when weeds are in an early growth stage.

9.2 Perennial Weeds

Best results are obtained when perennial weeds are treated after they reach the reproductive stage of growth (seedhead initiation in grasses and bud formation in broadleaves). For non-flowering plants, best results are obtained when the plants reach a mature stage of growth. In many situations, treatments are required prior to these growth stages. Under these conditions, use the higher application rate within the recommended range.

Allow 7 or more days after application before tillage.

Weed Species	Rate (QT/A)	Hand-Held % Solution
Alfalfa*	1	2
Alligatorweed*	4	1.5
Anise (fennel)	--	1-2
Bahiagrass	3-5	2
Bentgrass*	1.5	2
Bermudagrass	5	2
Bermudagrass, water (knotgrass)**	1.5	2
Bindweed, field	4-5	2
Bluegrass, Kentucky	2	2
Blueweed, Texas	4-5	2
Brackenfern	3-4	1-1.5
Bromegrass, smooth	2	2
Bursage, woolly-leaf	--	2
Canarygrass, reed	2-3	2
Cattail	3-5	2
Clover; red, white	3-5	2
Cogongrass	3-5	2
Dallisgrass	3-5	2
Dandelion	3-5	2
Dock, curly	3-5	2
Dogbane, hemp	4	2
Fescue (except tall)	3-5	2
Fescue, tall	1-3	2
Guineagrass	3	1
Horsenettle	3-5	2

Horseradish	4	2
Iceplant	2	1.5-2
Jerusalem artichoke	3-5	2
Johnsongrass	2-3	1
Kikuyugrass	2-3	2
Knapweed	4	2
Lantana	--	1-1.25
Lespedeza	3-5	2
Milkweed, common	3	2
Muhly, wirestem	2	2
Mullein, common	3-5	2
Napiergrass	3-5	2
Nightshade, silverleaf	2	2
Nutsedge; purple, yellow	3	1-2
Orchardgrass	2	2
Pampasgrass	3-5	1.5-2
Paragrass	3-5	2
Pepperweed, perennial	4	2
Phragmites*	3-5	1-2
Poison hemlock	--	1-2
Quackgrass	2-3	2
Redvine*	2	2
Reed, giant	--	2
Ryegrass, perennial	2-3	1
Smartweed, swamp	3-5	2
Spurge, leafy*	--	2
Sweet potato, wild*	--	2
Thistle, artichoke	--	2
Thistle, Canada	2-3	2
Timothy	2-3	2
Torpedograss*	4-5	2
Trumpetcreeper*	2	2
Vaseygrass	3-5	2
Velvetgrass	3-5	2
Wheatgrass, western	2-3	2

*Partial control

**Not registered in California for use on this weed

9.3 Woody Brush and Trees

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

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

Ensure thorough coverage when using spray-to-wet treatments using hand-held equipment. When using hand-held equipment for low volume directed-spray spot treatments, apply a 5 to 10% solution of this product.

Symptoms may not appear prior to frost or senescence with fall treatments.

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

Weed Species	Broadcast Rate (QT/A)	Hand-Held Spray-to-Wet % Solution
Alder	3-4	1-1.5
Ash*	2-5	1-2
Aspen, quaking	2-3	1-1.5
Bearmat (Bearclover)*	2-5	1-2
Beech*	2-5	1-2
Birch	2	1
Blackberry	3-4	1-1.5
Blackgum	2-5	1-2
Bracken	2-5	1-2
Broom; French, Scotch	--	1.5-2
Buckwheat, California*	--	1-2
Cascara*	2-5	1-2
Catsclaw*	--	1-1.5
Ceanothus*	2-5	1-2
Chamise*	2-5	1
Cherry; bitter, black, pin	2-3	1-1.5
Coyote brush	--	1.5-2
Dogwood*	2-5	1-2
Elderberry	2	1
Elm*	2-5	1-2
Eucalyptus	--	2
Florida holly(Brazilian Peppertree)*	2-5	1-2
Gorse*	2-5	1-2
Hasardia*	--	1-2
Hawthorn	2-3	1-1.5
Hazel	2	1
Hickory*	2-5	1-2
Honeysuckle	3-4	1-1.5
Hornbeam, American*	2-5	1-2
Kudzu	4	2
Locust, black*	2-4	1-2
Madrone resprouts*	--	2
Manzanita*	2-5	1-2
Maple, red	2-4	1-1.5
Maple, sugar	--	1-1.5
Monkey flower*	--	1-2
Oak; black,white*	2-4	1-2
Oak, post	3-4	1-1.5
Oak; northern, pin	2-4	1-1.5

Oak, Scrub*	2-4	1-1.5
Oak; southern red	2-3	1-1.5
Persimmon*	2-5	1-2
Pine	2-5	1-2
Poison ivy/Poison oak	4-5	2
Poplar, yellow*	2-5	1-2
Redbud, eastern	2-5	1-2
Rose, multiflora	2	1
Russian olive*	2-5	1-2
Sage, black	--	1
Sage, white*	2-5	1-2
Sage brush, California	--	1
Salmonberry	2	1
Saltcedar	2-5	1-2
Sassafras*	2-5	1-2
Sourwood*	2-5	1-2
Sumac; poison, smooth, winged*	2-4	1-2
Sweetgum	2-3	1-1.5
Swordfern*	2-5	1-2
Tallowtree, Chinese	--	1
Tan oak resprouts*	--	2
Thimbleberry	2	1
Tobacco, tree*	--	1-2
Trumpetcreeper	2-3	1-1.5
Vine maple*	2-5	1-2
Virginia creeper	2-5	1-2
Waxmyrtle, southern*	2-5	1-2
Willow	3	1

*Partial control

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10.0 LIMIT OF WARRANTY AND LIABILITY

Monsanto Company warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes set forth in the Complete Directions for Use label booklet ('Directions') when used in accordance with these 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.

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