

This sample label is current as of April 2, 2003. The product descriptions and recommendations provided in this sample label are for background information only. Always refer to the label on the product before using Monsanto or any other agrichemical product.

71014B1-14/53



Complete Directions for Use

EPA Reg. No. 524-500

Outrider herbicide is a selective herbicide for control of annual and perennial grass and broadleaf weeds in noncrop areas.

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.

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

Do not apply by aerial application unless permitted by supplemental 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.

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

1.0 INGREDIENTS

ACTIVE INGREDIENT:

Sulfosulfuron	75.0%
OTHER INGREDIENTS:.....	25.0%
	100.0%

This product is protected by U.S. Patent Nos. 5,017,212 and 5,534,482. No license granted under any non U.S. Patent(s).

2.0 IMPORTANT PHONE NUMBERS

- FOR PRODUCT INFORMATION OR ASSISTANCE IN USING THIS PRODUCT, CALL TOLL-FREE,
1-800-332-3111.
- IN CASE OF AN EMERGENCY INVOLVING THIS PRODUCT, OR FOR MEDICAL ASSISTANCE, CALL COLLECT, DAY OR NIGHT,
(314) 694-4000.

3.0 PRECAUTIONARY STATEMENTS

3.1 Hazards to Humans and Domestic Animals

Keep out of reach of children.

CAUTION!

CAUSES EYE IRRITATION

Avoid contact with eyes or clothing.

Wash thoroughly with soap and water after handling.

FIRST AID

IF IN EYES	<ul style="list-style-type: none"> Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing. Call a poison control center or physician for treatment advice.
<ul style="list-style-type: none"> Have the product container or label with you when calling a poison control center or physician, or going for treatment. In case of an emergency involving this product, Call Collect, day or night, (314) 694-4000. This product is identified as Outrider® Herbicide, EPA Reg. No. 524-500. 	

3.2 ENVIRONMENTAL HAZARDS

This chemical demonstrates the properties and characteristics associated with chemicals detected in ground water. The use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in ground water contamination.

This pesticide is highly toxic to non-target plants. Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Drift and runoff may be hazardous to plants in neighboring areas. Do not contaminate when cleaning of equipment or disposing of washwaters or rinsate.

The use of any pesticide in a manner that may kill or otherwise harm an endangered species or adversely modify their habitat is a violation of Federal Laws.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in any manner inconsistent with its labeling. This product can only be used in accordance with the Directions For Use on this label or in separately published Monsanto Supplemental Labeling.

4.0 STORAGE AND DISPOSAL

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

STORAGE: Store under cool, dry conditions (below 120°F). Do not store under moist conditions.

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.

See individual container label for disposal information.

5.0 GENERAL INFORMATION

Product Description: This product is a preemergence and postemergence systemic herbicide. It controls many annual and perennial weeds in noncrop sites. It is a selective herbicide and can be used over-the-top of many perennial grasses, such as: unimproved bahiagrass, Bermudagrass and tall fescue. It can also be used to control johnsongrass in the following native grasses: big bluestem, bushy bluestem, little bluestem, buffalograss, indian-grass, blue oats grama, side oats grama, lovegrass and switchgrass. It is formulated as a water dispersible granule (WDG).

Time to Symptoms: Outrider herbicide is absorbed by both the roots and the foliage of plants, rapidly inhibiting the growth of susceptible weeds. By 2 to 3 weeks after application to weeds, leaf growth slows and the growing points turn reddish-purple. Within 4 to 6 weeks of application, leaf veins and leaves become discolored, and the growing points subsequently die. Warm and moist conditions following application will accelerate herbicidal activity. Cold, dry conditions will delay herbicidal activity. Weeds stressed by drought are less susceptible to Outrider herbicide.

Rainfastness: Heavy rainfall soon after application (less than 2 hours) may wash this product off of the foliage and a repeat application may be required for adequate control.

Tank Mixing: Tank mixtures of this product may be used to increase the spectrum of vegetation controlled. Outrider herbicide can be tank mixed with other herbicides or materials that are specifically recommended on this label. 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.

Tank mixtures with broadleaf herbicides formulated as amines (including 2,4-D and others) will decrease the effectiveness of Outrider herbicide.

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

Annual Maximum Use Rate: The combined total of all treatments must not exceed 2.66 ounces of this product per acre per year.

IMPORTANT: Do not allow this product to contact roots or foliage of desirable vegetation, areas where roots of desirable vegetation may extend, or areas where this product may be washed or moved into contact with roots of desirable vegetation.

Desirable plants may be injured if planted into treated areas.

Do not use on feed or food crops.

ATTENTION

AVOID DRIFT. Care must be used when applying this product to prevent injury to desirable plants and crops. Do not allow the herbicide solution to mist, drift, or splash onto desirable vegetation or soil areas where sensitive crops will be planted since minute quantities of this product can cause severe damage or destruction to plants on which treatment was not intended. The likelihood of injury occurring from the use of this product increases when winds are gusty, as wind velocity increases, when wind direction is constantly changing or when there are other meteorological conditions that favor spray drift. 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. Drift control agent additives should be used for ground broadcast applications. When a drift control additive is used, read and carefully observe the precautionary statements and all other information appearing on the additive label.

6.0 MIXING

Thoroughly clean equipment prior to mixing spray solution.

6.1 Mixing with Water

This product mixes readily with water. Mix spray solutions of this product as follows: Fill the spray tank to about three-fourths of the desired volume. Add the recommended amount of this product. Complete the filling process while maintaining agitation. Use caution to avoid siphoning back into the carrier source. Use approved anti-back-siphoning devices where required by state or local regulations. Add nonionic surfactant near the end of the filling process where required.

6.2 Tank Mixing Procedure

For tank mixtures, add individual formulations to the spray tank in the following sequence: water, water soluble bags, dry flowables, emulsifiable concentrates, drift control additive, water soluble liquids followed by a nonionic surfactant. Tank mixtures of this product with Roundup PRO® Concentrate herbicide or Roundup PRO® herbicide do not require addition of surfactant.

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

6.3 Surfactants

Addition of a nonionic surfactant at 0.5 percent by volume (2 quarts per 100 gallons of spray solution) is required for post-emergence applications unless tank mixed with Roundup PRO Concentrate herbicide or Roundup PRO herbicide. Use only nonionic surfactants which contain at least 90 percent active ingredient. When this product is applied in a tank mixture with Roundup PRO Concentrate herbicide or Roundup PRO herbicide, addition of a surfactant is not necessary.

7.0 APPLICATION EQUIPMENT AND TECHNIQUES

DO NOT APPLY BY AERIAL APPLICATION UNLESS PERMITTED BY SUPPLEMENTAL LABELING.

SPRAY DRIFT MANAGEMENT

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

Avoiding spray drift at the application site is the responsibility of the applicator. The interaction of many equipment- and weather-related factors determine the potential for spray drift. The applicator is responsible for considering all these factors when making decisions.

Do not apply product through any type of irrigation system.

Apply these spray solutions in properly maintained and calibrated equipment capable of delivering desired volumes.

Do not allow the herbicide solution to mist, drift, or splash onto desirable vegetation or soil areas where sensitive crops will be planted since minute quantities of this product can cause severe damage or destruction to plants on which treatment was not intended.

7.1 Ground Broadcast Equipment

Apply Outrider herbicide uniformly with properly calibrated ground equipment in 10 to 50 gallons of water per acre. Select spray volumes that ensure thorough and uniform weed coverage. Use equipment which is capable of continuous agitation. Choose nozzles which provide optimum spray distribution and uniform coverage at the appropriate spray pressure. Avoid streaking, skips, overlaps and spray drift during applications.

7.2 Hand-Held and High-Volume Equipment

Hand-held spray guns, backpacks, or other similar sprayers may be used to apply this product. 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.

7.3 Injection Systems

This product may be used in ground injection spray systems. It may be diluted prior to injecting into the spray stream. Do not mix this product with the undiluted concentrate of other products when using injections systems, unless specifically recommended.

7.4 Equipment Cleaning

Thoroughly clean application equipment immediately after Outrider herbicide use. Prepare a tank cleaning solution which consists of a 1 percent solution of ammonia (one quart of ammonia for every 25 gallons of water). Use sufficient cleaning solution to thoroughly rinse all surfaces and to flush all hoses. Repeat the procedure with the ammonia solution. Complete the cleaning process by rinsing with clean water.

If visible residue is present in the spray tank, a solution consisting of 1 percent ammonia plus 0.25 percent nonionic surfactant (0.25 quart per 25 gallons of water) is recommended for adequate cleansing.

8.0 SITE AND USE RECOMMENDATIONS

Outrider herbicide may be used for general weed control on non-crop sites including roadsides, utility rights-of-way, airports, fallow areas, ditch banks, dry ditches, dry canals, fencerows, industrial sites, lumberyards, manufacturing sites, petroleum tank farms and pumping installations, railroads, storage areas, utility substations, warehouse areas, and similar industrial and noncrop sites.

8.1 Bermudagrass and Bahiagrass

Outrider herbicide may be used to control or partially control many annual and perennial weeds for effective release of Bermudagrass and bahiagrass on roadsides and other labeled noncrop sites.

Ground Broadcast Application

Apply Outrider herbicide at 0.75 to 2.0 ounces per acre. Do not exceed 2.66 ounces of this product per acre per year. Follow-up applications should be made after suitable re-growth of weeds and no sooner than 30 days after the previous application.

Use the higher recommended rates of this product for control of large established weeds or when weed growth is heavy or dense. Best results are obtained when weeds are in the early stage of growth and are not disturbed by mowing or other factors for 12 days prior to, or 12 days after application.

Addition of a nonionic surfactant at 0.5 percent by volume (2 quarts per 100 gallons of spray solution) is required for post-emergence applications unless tank mixed with Roundup PRO Concentrate herbicide or Roundup PRO herbicide. Use only non-ionic surfactants which contain at least 90 percent active ingredient. When this product is applied in a tank mixture with Roundup PRO Concentrate herbicide or Roundup PRO herbicide, addition of a surfactant is not necessary.

Hand-Held and High-Volume Equipment Application

Add 1.0 ounce of Outrider herbicide per 100 gallons of water. Add 2 quarts of a nonionic surfactant per 100 gallons of spray solution. Use only nonionic surfactants containing at least 90 percent active ingredient.

Tank Mixtures

Tank mixtures of this product may be used to increase the spectrum of vegetation controlled. When tank mixing, read and carefully observe the label directions, precautionary statements and all information on the labels of all products used.

Any recommended rate of this product may be tank mixed with the following products. Refer to these product labels for approved noncrop sites and application rates. Always apply tank mixtures according to the most restrictive label of the products used. Products recommended as tank mixes with Outrider herbicide for Bermudagrass or bahiagrass release are restricted to those specified in the "RELEASE OF BERMUDAGRASS OR BAHIAGRASS" section.

BANVEL®	PLATEAU®
CAMPAIGN®	ROUNDUP PRO
DIURON	ROUNDUP PRO CONCENTRATE
ESCORT®	TELAR®
GARLON® 3A	TRANSLINE®
KARMEX® DF	VANQUISH®
MSMA	2,4-D ¹
OUST®	

¹ Tank mixtures with this herbicide may be made provided the specific product is registered for this use.

NOTE: Tank mixtures with broadleaf herbicides formulated as amines (including 2,4-D and others) will decrease the effectiveness of Outrider herbicide.

Release of Dormant Bermudagrass or Bahiagrass

This product may be used to control or partially control many winter annual weeds for effective release of dormant Bermudagrass or bahiagrass when treated after grass is dormant and prior to spring green-up.

Apply any labeled rate of this product alone or in a tank mixture with 6.4 to 51 fluid ounces of Roundup PRO Concentrate herbicide, 8 to 64 fluid ounces of Roundup PRO herbicide or with 16

to 64 fluid ounces of Campaign herbicide per acre. In dormant Bermudagrass only, up to 1 ounce per acre of Escort may be added to Outrider herbicide or tank mixtures of Outrider herbicide and Roundup PRO Concentrate or Roundup PRO herbicide to increase the spectrum of broadleaf weeds controlled. Addition of Escort may delay green-up of Bermudagrass. Tank mixtures of this product with Escort in highly maintained turfgrass areas will result in unacceptable turf injury.

In the state of Texas, applications of Outrider herbicide applied before September 30 will not delay green-up of Bermudagrass the following spring, however some temporary discoloration of desirable spring germinating wildflowers may occur.

Release of Actively Growing Bermudagrass

This product may be used to control or partially control johnsongrass and other weeds for effective release of actively growing Bermudagrass. Use only on well-established Bermudagrass. Apply any labeled rate of this product alone or in a tank mixture with 6.4 to 26 fluid ounces of Roundup PRO Concentrate herbicide or 8 to 32 fluid ounces of Roundup PRO herbicide per acre. Use the higher rates of each product to control perennial weeds or annual weeds greater than 6 inches in height.

Up to 0.5 ounce per acre of Oust, up to 1 ounce per acre of Escort, or up to 0.5 ounce per acre of Telar may be added to Outrider herbicide or tank mixtures of Outrider herbicide with Roundup PRO Concentrate herbicide or Roundup PRO herbicide. DO NOT apply tank mixtures of this product with Oust, Escort or Telar in highly maintained turfgrass areas.

Release of Actively Growing Bahiagrass

This product may be used to control or partially control johnsongrass and other weeds for effective release of actively growing bahiagrass. Use only on well established bahiagrass. Apply any labeled rate of this product alone or in a tank mixture with 3.2 to 9.6 ounces of Roundup PRO Concentrate herbicide or 4 to 12 ounces of Roundup PRO herbicide per acre. Use the higher rates of each product to control perennial weeds or annual weeds greater than 6 inches in height.

IMPORTANT: Established Bermudagrass and bahiagrass are tolerant to Outrider herbicide applications. Tank mixtures of other products with Outrider herbicide may increase grass injury. Where Bermudagrass or bahiagrass are desirable ground cover, use tank mixtures only when some temporary injury or discoloration can be tolerated.

8.2 Tall Fescue

Outrider herbicide may be used to control or partially control johnsongrass and other weeds in tall fescue on roadsides and other labeled noncrop sites.

Use this product only in well-established tall fescue. Use of labeled rates can result in transient growth reduction and discoloration of tall fescue but these cause no long-term detrimental effects.

Ground Broadcast Application

Apply Outrider herbicide at 0.75 to 1.0 ounce per acre. Do not exceed 1.0 ounce of this product per acre per year.

Use the higher recommended rate for control of large established weeds or when weed growth is heavy or dense. Best results are obtained when weeds are actively growing and are not disturbed by mowing or other factors for 14 days prior to, or 14 days after application.

Addition of a nonionic surfactant at 0.5 percent by volume (2 quarts per 100 gallons of spray solution) is required. Use only nonionic surfactants containing at least 90 percent active ingredient.

Hand-Held and High-Volume Equipment Application

Add 1.0 ounce of Outrider herbicide per 100 gallons of water. Add 2 quarts of a nonionic surfactant per 100 gallons of spray solution. Use only nonionic surfactants containing at least 90 percent active ingredient.

Applications should be made to actively growing johnsongrass in early boot to full seadhead stage. Symptom development will be more rapid in less mature johnsongrass.

8.3 Native Grasses

Outrider herbicide may be used postemergence to control johnsongrass, yellow nutsedge, purple nutsedge, tall fescue and other weeds listed in the "WEEDS CONTROLLED" section of this label in the following perennial native grasses: big bluestem, little bluestem, bushy bluestem, blue oats grama, side oats grama, buffalograss, indiagrass, lovegrass and switchgrass.

Apply Outrider herbicide at 0.75 to 2.0 ounces per acre. Do not exceed 2.66 ounces of this product per acre per year. Follow-up applications should be made after suitable re-growth of weeds and no sooner than 30 days after the previous application.

Use the higher recommended rates of this product for control of large established weeds or when weed growth is heavy or dense. Best results are obtained when weeds are in the early stage of growth and are not disturbed by mowing or other factors for 12 days prior to, or 12 days after application.

Addition of a nonionic surfactant at 0.5 percent by volume (2 quarts per 100 gallons of spray solution) is required for postemergence applications.

9.0 WEEDS CONTROLLED

Use the higher recommended rates of this product for control of large established weeds or when weed growth is heavy or dense. Best results are obtained when weeds are in the early stages of growth and are not disturbed by mowing or other factors for 12 days prior to, or 12 days after application.

ANNUAL AND PERENNIAL WEED SPECIES

Barley, volunteer

Hordeum vulgare

Bedstraw, catchweed

Galium aparine

Bluegrass, bulbous

Poa bulbosa

Bluegrass, roughstalk

Poa trivialis

Brome, downy

Bromus tectorum

Brome, ripgut

Bromus rigidus

Buttercup

Ranunculus arvensis

Chamomile, mayweed

Anthemus cotula

Cheat

Bromus secalinus

Chess, hairy

Bromus commutatus

Chickweed, common

Stellaria media

Cocklebur, common

Xanthium strumarium

Fiddleneck, tarweed

Amsinckia lycopsoides

Flixweed

Descurainia sophia

Horseweed

Conyza canadensis

Johnsongrass

Sorghum halepense

Ladysthumb

Polygonum persicaria

Mustard, tumble

Sisymbrium altissimum

Mustard, wild

Sinapis arvensis

Pennycress, field

Thlaspi arvense

Purple Nutsedge

Cyperus rotundus

Quackgrass

Elytrigia repens

Ragweed, common

Ambrosia artemisiifolia

Shepherd's-purse

Capsella bursa-pastoris

Sunflower, common

Helianthus annuus

Tansymustard, pinnate

Descurainia pinnata

Vaseygrass

Paspalum urvillei

Vetch, sand

Vicia acutifolia

Yellow Nutsedge

Cyperus esculentus

trol of this Company, including, but not limited to, incompatibility with products other than those set forth in the Directions, application to or contact with desirable vegetation, unusual weather, weather conditions which are outside the range considered normal at the application site and for the time period when the product is applied, as well as weather conditions which are outside the application ranges set forth in the Directions, application in any manner not explicitly set forth in the Directions, moisture conditions outside the moisture range specified in the Directions, or the presence of products other than those set forth in the Directions in or on the soil, crop or treated vegetation.

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

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EPA Reg. No. 524-500

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

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ST. LOUIS, MISSOURI, 63167 U.S.A.

Formulated in the United States Using Active Ingredient Made in Japan.

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 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 con-