

GROUP 2 HERBICIDE



Complete Directions for Use Pamphlet

EPA Reg. No. 59639-223

WATER DISPERSIBLE GRANULE

Outrider® Herbicide is a selective herbicide for the control of certain annual and perennial grasses and broadleaf weeds in select pasture grasses and rangelands, non-crop areas and in winter and spring wheat.

Read the entire label before using this product.

Use only according to label instructions.

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

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

THIS IS AN END-USE PRODUCT. VALENT U.S.A. CORPORATION DOES NOT INTEND AND HAS NOT REGISTERED IT FOR REFORMULATION OR REPACKAGING.

1.0 INGREDIENTS

ACTIVE INGREDIENT:

Sulfosulfuron	75.0%
OTHER INGREDIENTS	25.0%
	100.0%

2.0 IMPORTANT PHONE NUMBERS

FOR PRODUCT INFORMATION OR ASSISTANCE IN USING THIS PRODUCT, CALL TOLL-FREE, 800-682-5368

IN CASE OF AN EMERGENCY INVOLVING THIS PRODUCT, OR FOR MEDICAL ASSISTANCE, CALL, DAY OR NIGHT, 800-892-0099

3.0 PRECAUTIONARY STATEMENTS

3.1 Hazards to Humans and Domestic Animals

KEEP OUT OF REACH OF CHILDREN

CAUTION

CAUSES MODERATE EYE IRRITATION

Avoid contact with eyes or clothing. Wash thoroughly with soap and water after handling.

FIRST AID

IF IN EYES Hold eye open and rinse slowly and gently with water for 15 to 20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eyes. Call a poison control center or physician for treatment advice.

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, day or night, **800-892-0099**.

This product is identified as **Outrider Herbicide, EPA Reg. No. 59639-223**.

PERSONAL PROTECTIVE EQUIPMENT (PPE):

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

When handlers use closed systems or enclosed cabs 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 Recommendations

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
- Users should remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.
- Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

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 or 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 water when cleaning 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 Valent U.S.A. Corporation Supplemental Labeling. Supplemental labeling can be obtained by contacting your Authorized Valent U.S.A. Corporation Retailer or Valent U.S.A. Corporation Representative.

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

Agricultural Use Requirements

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

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 12 hours.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is coveralls, shoes plus socks, chemical-resistant gloves, such as nitrile rubber, neoprene rubber or polyethylene. For more options, follow instructions for category A (dry and water-based formulations) on an EPA chemical resistant category selection chart.

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 (40 CFR Part 170) for agricultural pesticides. The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries or greenhouses.

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

4.0 STORAGE AND DISPOSAL

Proper pesticide storage and disposal are essential to protect against exposure to people and the environment due to leaks and spills, excess product or waste, and vandalism. Do not allow this product to contaminate water, foodstuffs, feed or seed by storage or disposal.

PESTICIDE STORAGE: Store pesticides away from food, pet food, feed, seed, fertilizers, and veterinary supplies. Keep container closed to prevent spills and contamination.

PESTICIDE DISPOSAL: To avoid wastes, use all material in this container, including rinsate, by application in accordance with label directions. If wastes cannot be avoided, offer remaining product to a waste disposal facility or pesticide disposal program. Such programs are often run by state or local governments or by industry. All disposal must be in accordance with applicable Federal, State and local procedures.

CONTAINER HANDLING: Nonrefillable container. Do not reuse or refill this container. Offer for recycling if available.

Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by State and local authorities, by burning. If burned stay out of smoke.

5.0 PRODUCT INFORMATION

Product Description: *Outrider* Herbicide is a selective, systemic herbicide, formulated as a water dispersible granule (WDG) for control of many annual and perennial weeds in listed non-crop sites, pastures and rangeland, and for control of certain grasses and broadleaf weeds in winter and spring wheat.

Time to Symptoms: This product is absorbed through the roots and foliage of plants. Soon after application, growth of susceptible weeds is inhibited and in cropping situations susceptible weeds are no longer competitive with the crop. Following growth inhibition, affected plants may appear dark green and stunted, affected leaves will turn yellow and/or red, and the growing point of the plant may turn reddish-purple. These visible effects of control may not be observed for 1 to 3 weeks after application. Within 6 weeks after application the growing points die. Warm and moist conditions following application will accelerate herbicidal activity. Cool, dry conditions

will delay herbicidal activity. Weeds stressed by drought are less susceptible to this product.

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.

Maximum Annual Use Rate for Non-Crop, Pasture and Rangeland Uses (Refer to the Wheat Use section for maximum use rates for that use.): The combined total of all applications of this product must not exceed 2.66 ounces of product per acre per year.

5.1 Weed Resistance Management

Biotypes of certain plants have demonstrated resistance to sulfonylurea herbicides or other herbicides with the same mode of action. Biotypes are naturally occurring individuals of a species that are identical in appearance but have slightly different genetic composition.

Sulfosulfuron, the active ingredient in this product, is a Group 2 herbicide based on the mode of action classification system of the Weed Science Society of America. Any weed population can contain plants naturally resistant to Group 2 herbicides. Weed species resistant to Group 2 herbicides may be effectively managed utilizing another herbicide from a different Group, or by using other cultural or mechanical practices.

General principles of herbicide resistance management:

1. Apply integrated weed management practices. Use multiple herbicide modes-of-action with overlapping weed spectrums in rotation, sequences, or mixtures.
2. Use the full herbicide rate and proper application timing for the hardest to control weed species present in the field.
3. Scout fields after herbicide application to ensure control has been achieved. Avoid allowing weeds to reproduce by seed or to proliferate vegetatively.
4. Monitor site and clean equipment between sites.

For annual cropping situations also consider the following:

- Start with a clean field and control weeds early by using a burndown treatment or tillage in combination with a preemergence residual herbicide as appropriate.
- Use cultural practices such as cultivation and crop rotation, where appropriate.
- Use good agronomic principles that enhance crop competitiveness.
- Use new commercial seed that is as free of weed seed as possible.

Report any incidence of repeated non-performance of this product on a particular weed to your Valent

U.S.A. Corporation representative, local retailer, or county extension agent.

6.0 MIXING

Thoroughly clean mixing and application equipment prior to mixing spray solution.

Eliminate any risk of siphoning the contents of the spray or mixing tank back into the carrier source while mixing. Use approved anti-back-siphoning devices where required by State or local regulations.

APPLY SPRAY SOLUTIONS WITHIN 24 HOURS AFTER MIXING.

6.1 Water Carrier

This product mixes readily with water. Mix spray solutions of this product as follows. Fill the spray tank with three-fourths of the desired final volume. Add the appropriate amount of this product to achieve the desired application rate as defined on this label (see the appropriate section of this label for application rates). Continue the filling process while maintaining agitation. When using a nonionic surfactant in non-crop uses or in postemergence applications in wheat, add the nonionic surfactant near the end of the filling process.

6.2 Surfactants and Adjuvants

A nonionic surfactant is required for all postemergence applications of this product and is the only adjuvant required to be added to the spray solution. For in-crop applications, use only nonionic surfactants that are approved by EPA for use on food crops. Use only nonionic surfactants that contain at least 90 percent active ingredient. Add nonionic surfactants to a concentration of 0.25 to 0.5 percent by volume (1 to 2 quarts per 100 gallons of spray solution), unless otherwise directed. **DO NOT USE NONIONIC SURFACTANTS OR OTHER ADDITIVES THAT ALTER THE pH OF THE SPRAY SOLUTION BELOW pH 5.**

Oil-based adjuvants or adjuvants containing oils are not recommended when this herbicide is tank-mixed with emulsifiable concentrate pesticide formulations.

Do not use low rates of liquid fertilizer as a substitute for surfactant.

6.3 pH Adjustment

Spray solutions of between pH 6.0 and 8.0 are required for optimal performance of this product. Failure to adjust the pH of the spray solution may result in reduced weed control. Follow the mixing procedure described on this label and adjust the pH of the spray solution after the addition of nonionic surfactant. To adjust the pH, add between 2 to 4 quarts (depending on the starting pH of your water carrier) of a 7-percent solution of ammonia for every 100 gallons of spray solution.

CAUTION: Do not use ammonia with chlorine bleach as your pH adjuster, as dangerous gases will form.

6.4 Tank Mixtures

Tank mixtures of this product with other herbicide products may be used to provide a broader spectrum

of weed control and an alternate mode of herbicidal action. Tank-mix this product with other herbicides or materials that are listed in the specific use site sections of this label. Refer to each individual product label or supplemental labeling for all products in the tank mixture, and observe all instructions, precautions and limitations on the label, including application rates and restrictions related to soil texture, soil organic matter, wheat growth stage and crop rotation. Use the mixture according to the most restrictive precautionary statements for each product in the tank mixture.

To the extent consistent with applicable law, 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 listed on this label. Mixing this product with herbicides or other materials that are not listed on this label may result in reduced performance.

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

When a generic active ingredient, such as 2,4-D, dicamba, diuron or MSMA is listed on this label for tank-mixing with this product, the user is responsible for ensuring that the specific application being made is included on the label of the product being used in the tank mixture.

Always predetermine the compatibility of all tank-mix products together in the carrier by mixing small proportional quantities before mixing in the spray tank. When preparing tank mixtures, add individual components to the spray tank in the following sequence: water, water dispersible granules (this product), water-soluble bags, dry flowables, emulsifiable concentrates, drift control additives, water-soluble liquids, nonionic surfactants.

7.0 APPLICATION EQUIPMENT AND TECHNIQUES

This product may be applied using either ground or aerial (fixed-wing or helicopter) spray application equipment. Apply spray solutions of this product using properly maintained and calibrated equipment capable of delivering desired volumes. Use equipment that is capable of continuous and vigorous agitation. Use an agitation system capable of creating a rippling or rolling action on the liquid surface when the tank is full.

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

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

7.1 Aerial Application

All treatments described on this label may be made using aerial equipment where appropriate, except where specifically prohibited, provided that the applicator complies with the precautions and restrictions described in the **SPRAY DRIFT MANAGEMENT** section of this label.

7.2 Injection Systems

This product may be used in ground applicator 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 directed.

7.3 Equipment Cleaning

Thoroughly clean application equipment with a 1-percent solution of ammonia (one quart of ammonia for every 25 gallons of rinse water) promptly after using this product. Use a sufficient volume of cleaning solution to thoroughly rinse all surfaces and to flush all hoses. Rinse with water and repeat the cleaning procedure with the ammonia solution. Complete the cleaning procedure by rinsing thoroughly with clean water.

If visible residue is present in the spray tank, use a 1-percent solution of ammonia plus 0.25 percent nonionic surfactant (8 fluid ounces for every 25 gallons of rinse water) as the cleaning solution.

8.0 SPRAY DRIFT MANAGEMENT

Avoiding spray drift at the application site is the responsibility of the applicator. The interaction of many equipment- and weather-related factors determines the potential for spray drift. The applicator and the grower are responsible for considering all these factors when making decisions. The following drift management requirements must be followed to avoid off-target drift movement from aerial applications. These requirements do not apply to forestry applications.

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 sensitive 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. Drift potential increases at wind speeds less than 3 miles per hour or more than 10 miles per hour. However, equipment type, nozzle size, and other factors influence drift potential at any given wind speed. When spraying, avoid combinations of pressure and nozzle type that will result in splatter or fine particles (mist) which are likely to drift. Do not apply at excessive speed or pressure. **AVOID WINDLESS AND GUSTY WIND CONDITIONS.**

AERIAL SPRAY DRIFT REQUIREMENTS

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

Importance of droplet size

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

Controlling droplet size

- **Volume:** Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with the higher rated flows produce larger droplets.
- **Pressure:** Use the lower spray pressures for the nozzle. Higher pressure reduces droplet size and does not improve canopy penetration. When higher flow rates are needed, use higher flow rate nozzles instead of increasing pressure.
- **Number of Nozzles:** Use the minimum number of nozzles that provide uniform coverage.
- **Nozzle Orientation:** Orienting nozzles so that the spray is released backwards, parallel to the air stream, will produce larger droplets than other orientations. Significant deflection from the horizontal will reduce droplet size and increase drift potential.
- **Nozzle Type:** Use a nozzle type that is designed for the intended application. With most nozzle types, narrower spray angles produce larger droplets. Consider using low-drift nozzles. Solid stream nozzles oriented straight back produce larger droplets than other nozzle types.
- **Boom Length:** For some use patterns, reducing the effective boom length to less than 3/4 of the wing-span or rotor length may further reduce drift without reducing swath width.
- **Application Height:** Applications must not be made at a height greater than 10 feet above the top of the largest plants unless a greater height is required for aircraft safety. Making applications at the lowest height that is safe reduces the exposure of the droplets to evaporation and wind.

Swath Adjustment

When applications are made with a crosswind, the swath will be displaced downwind. Therefore, on the up and downwind edges of the field, the applicator must compensate for this displacement by adjusting the path of the aircraft upwind. Increase swath

adjustment distance with increasing drift potential (higher wind, smaller droplets, etc.).

Wind

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

Temperature and Humidity

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

Temperature Inversions

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

Sensitive Areas

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

9.0 NON-CROP, PASTURES AND RANGELAND

Use Sites:

Non-crop Use Sites: Use this product for weed control on non-crop sites including airports, conservation areas, ditch banks, dry ditches, dry canals, fallow areas, fencerows, industrial sites, lumberyards, manufacturing sites, natural areas, petroleum tank farms and pumping installations, railroads, roadsides, storage areas, utility rights-of-way, utility sites and substations, warehouse areas and wildlife areas.

Pasture and Rangeland Use Sites: Use this product for weed control in pastures, hayfields and rangelands as defined in this label. It can be used for weed control in perennial native grasses as defined on the label.

Do not use this product on or around athletic fields, commercial turf sites, golf courses, residential turf sites or sod and turfgrass seed farms.

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.

Application Equipment and Techniques

Best results are obtained when weeds are actively growing and not disturbed by mowing for at least 14 days before and 14 days after application.

Ground Broadcast Application

Apply this product uniformly with properly calibrated ground application equipment at rates specified on this label in 10 to 50 gallons of water per acre. Select spray volumes that ensure thorough and uniform weed coverage. Spray booms should be equipped with nozzles that provide optimum spray distribution and uniform coverage at the appropriate spray pressure to minimize streaking, skips, overlaps and spray drift during application.

Aerial Application

Apply this product at rates specified on this label in 5 to 15 gallons of water per acre when making aerial applications, unless otherwise specified.

Hand-Held and High-Volume Application

Hand-held spray guns, backpack sprayers and other similar types of sprayers may be used to apply this product. Follow the use directions for hand-held and high-volume application in the specific use sections of this label. Apply to foliage of vegetation to be controlled at a rate of approximately 2 gallons of spray solution per 1000 square feet. Spray coverage should be uniform and complete. Do not spray to the point of runoff. Use coarse sprays only.

9.1 Bermudagrass and Bahiagrass Non-Crop Sites

Use this product to control or partially control many annual and perennial weeds for effective release of bermudagrass and bahiagrass on roadsides and other non-crop sites listed in this section of this label.

Ground Broadcast Application

Apply at 0.75 to 2 ounces of product per acre in a spray solution containing a nonionic surfactant at a concentration of 0.25 percent by volume. Use the higher application rate of this product within the range for control of large established weeds or when weed growth is heavy or dense. Follow-up applications can be made after suitable re-growth of weeds but no sooner than 30 days after the previous application.

Hand-Held and High-Volume Application

With hand-held and high-volume spray equipment, apply a spray solution consisting of 1 ounce of this product plus 1 quart of a nonionic surfactant (0.25 percent) per 100 gallons of spray solution.

Tank Mixtures

ESTABLISHED STANDS OF BERMUDAGRASS AND BAHIAGRASS ARE TOLERANT TO THIS PRODUCT AT RATES SPECIFIED ON THIS LABEL; HOWEVER, TANK MIXTURES OF THIS PRODUCT WITH OTHER HERBICIDES MAY INCREASE GRASS INJURY. USE THESE TANK MIXTURES ONLY WHEN SOME TEMPORARY INJURY OR DISCOLORATION OF THE BERMUDAGRASS AND BAHIAGRASS CAN BE TOLERATED.

Tank mixtures of this product with other herbicides may be used to increase the spectrum of weed control in bermudagrass and bahiagrass.

This product may be applied at a rate of 0.75 to 2 ounces per acre in a tank-mix with the following products.

2,4-D, chlorsulfuron, clopyralid, dicamba, diuron, glyphosate, imazapic, metsulfuron methyl, MSMA, sulfometuron methyl, triclopyr

Campaign[®], Escort, Escort XP, Garlon 3A, Garlon 4, MSMA, Oust, Oust XP, Plateau, Roundup PROMAX[®], Roundup PRO[®] Concentrate, Telar DF, Transline, Vanquish

Refer to the label of each individual product included in the tank mixture for application rates and use instructions for weed control on bermudagrass and bahiagrass turf sites.

A surfactant does not need to be added to the spray solution when this product is tank-mixed with Campaign, Roundup PROMAX, or Roundup PRO Concentrate herbicides.

Release of Dormant Bermudagrass or Bahiagrass

This product may be tank-mixed with Campaign, Roundup PROMAX, or Roundup PRO Concentrate herbicides to control or partially control many winter annual weeds in dormant bermudagrass and bahiagrass prior to spring green-up.

In dormant bermudagrass or bahiagrass, apply 0.75 to 2 ounces of this product per acre, alone or in a tank mixture with one of the following herbicide products at an application rate within the range indicated.

Tank-Mix Product	Application Rate
Campaign	16 to 64 fluid ounces per acre
Roundup PROMAX	5 to 44 fluid ounces per acre
Roundup PRO Concentrate	6.4 to 51 fluid ounces per acre

In dormant bermudagrass only, up to 1 ounce per acre of Escort may be applied along with 0.75 to 2 ounces of this product, alone or in a three-way tank mixture with Roundup PROMAX or Roundup PRO Concentrate herbicides at the rates indicated in the previous table, to increase the spectrum of broad-leaf weeds controlled. Addition of Escort may delay green-up of bermudagrass in the spring. **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 this product 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 tank-mixed with Roundup PROMAX or Roundup PRO Concentrate herbicides to control or partially control johnsongrass and other weeds in bermudagrass when it is actively growing. Use only on well-established stands of bermudagrass. Apply 0.75 to 2 ounces of this product alone or in a tank mixture with one of the following herbicide products within the range of application rates indicated. Use the higher application rate within the range to control perennial weeds or annual weeds greater than 6 inches in height.

Tank-Mix Product	Application Rate
Roundup PROMAX	5 to 22 fluid ounces per acre
Roundup PRO Concentrate	6.4 to 26 fluid ounces per acre

The following herbicide products can also be applied at the application rates indicated in a tank mixture with 0.75 to 2 ounces of this product per acre, alone or in a three-way tank mixture with Roundup PROMAX or Roundup PRO Concentrate herbicides at the application rates indicated in the previous table.

Tank-Mix Product	Application Rate
Escort	1 ounce per acre
Oust	0.5 ounce per acre
Telar	0.5 ounce per acre

DO NOT apply this product in tank mixtures with Escort, Oust, or Telar in highly maintained turfgrass areas.

Release of Actively Growing Bahiagrass

This product may be tank-mixed with Roundup PROMAX or Roundup PRO Concentrate herbicides to control or partially control johnsongrass and other weeds in bahiagrass while it is actively growing. Use only on well-established stands of bahiagrass. Apply 0.75 to 2 ounces of this product per acre, alone or in a tank mixture with one of the following herbicide products at the application rate indicated.

Tank-Mix Product	Application Rate
Roundup PROMAX	4 fluid ounces per acre
Roundup PRO Concentrate	5 fluid ounces per acre

9.2 Tall Fescue Non-Crop Sites

This product may be used to control or partially control johnsongrass and other weeds listed in the **WEEDS CONTROLLED** section of this label in tall fescue on roadsides and other non-crop sites listed on this label.

Use this product only on well-established stands of tall fescue. Even at rates listed in this section, use of this product may result in temporary chlorosis and discoloration, and may result in transient growth reduction of the desirable turf. These symptoms generally appear 7 to 10 days after application and are typically gone within 21 to 28 days.

Ground Broadcast Application

Apply this product at 0.75 to 1 ounce per acre in a spray solution containing a nonionic surfactant at a concentration of 0.25 percent by volume. Do not exceed 1 ounce of this product per acre per year. Use the higher application rate of this product within the range for control of large established weeds or when weed growth is heavy or dense.

Hand-Held and High-Volume Application

With hand-held and high-volume spray equipment, apply a spray solution consisting of 1 ounce of this product plus 1 quart of a nonionic surfactant (0.25 percent) per 100 gallons of spray solution.

Tank Mixtures

Tank mixtures of this product may be used to increase the spectrum of vegetation controlled in tall fescue. This product may be applied at 0.75 to 1 ounce per acre in a tank-mix with the following products.

2,4-D, clopyralid, dicamba, metsulfuron methyl, MSMA, triclopyr

Escort, Escort XP, Garlon 3A, Garlon 4, MSMA, Transline

Refer to the label of each individual product included in the tank mixture for application rates and use instructions for weed control on tall fescue sites.

9.3 Bermudagrass and Bahiagrass Pasture Sites

This product may be used in early spring through the fall to control or partially control the weeds listed in the **WEEDS CONTROLLED** section of this label in well-established bermudagrass and bahiagrass pastures.

Grass forage may be grazed immediately after application. However, for best weed control, do not mow or harvest the pasture to be treated for 2 weeks before or 2 weeks after application. For best control of johnsongrass, make application when the johnsongrass is actively growing, is at least 18 to 24 inches tall and up to the heading stage.

For control of large established weeds or when weed growth is particularly heavy or dense, a single application of up to 2 ounces of this product can be made.

Ground Broadcast Application

Apply 1.33 ounces of this product per acre along with a nonionic surfactant at a concentration of 0.25 percent by volume (1 quart per 100 gallons of spray solution) in 10-50 gallons of spray solution per acre. A follow-up application can be made after suitable regrowth of weeds but no sooner than 40 days after the previous application.

Hand-Held and High-Volume Application

With hand-held and high-volume spray equipment, apply a spray solution consisting of 1.33 ounces of this product plus 1 quart of a nonionic surfactant (0.25 percent) per 100 gallons of spray solution. A follow-up application can be made after suitable regrowth of weeds but no sooner than 40 days after the previous application.

9.4 Pasture and Rangeland Sites in States West of the Mississippi River

This product may be used in pasture and rangeland grasses in States west of the Mississippi River in the fall or spring to provide selective post-emergent control or partial control of the weeds specified in the **WEEDS CONTROLLED** section of this label.

This product is selective in crested wheatgrass and selectivity in other pasture grasses is increased when they are not actively growing. Temporary stunting or chlorosis of grasses may occur but desirable grasses will recover. If concern exists about selectivity on desirable grasses, a small area should be treated to confirm selectivity.

Grass forage may be grazed immediately after application. However, for best weed control do not mow or graze the pasture or rangeland for 2 weeks before or after application.

Ground Broadcast and Aerial Application

Apply 0.75 to 1.33 ounces of this product per acre along with a nonionic surfactant. Use the higher rate when weeds are in advanced growth stage. The level of weed control following application is dependent on weed species and weed stage of growth at application. For best results, weeds should be actively growing and in an early vegetative stage.

Refer to the **SPRAY DRIFT MANAGEMENT** section of this label for guidelines regarding spray drift management.

Dormant Pastures and Rangelands

Apply 0.75 to 1.33 ounces of this product per acre in a tank mix with Roundup PRO Concentrate at 10 to 13 fluid ounces per acre or Roundup PROMAX at 8 to 11 fluid ounces per acre for control of weeds in dormant pastures. Tank mixing this product with Roundup PROMAX herbicide at rates below 12 ounces per acre requires the addition of a nonionic surfactant to the spray solution at a concentration of 0.25 percent by volume (1 quart per 100 gallons of spray solution). Make these applications when the desirable pasture grass species are dormant and a new flush of the target weeds is emerged and actively growing.

9.5 Native Grasses and Conservation Reserve Program (CRP) Sites

This product may be used to selectively control the weeds listed in the **WEEDS CONTROLLED** section of this label in perennial native grassland areas, including land enrolled in the Federal Conservation Reserve Program (CRP). This product may be applied to the following native perennial grasses:

- big bluestem
- little bluestem
- bushy bluestem
- blue oats grama
- side oats grama
- buffalograss
- Indiangrass
- lovegrass
- switchgrass

For selective weed control in the native grasses listed in this section, apply 1.33 to 2 ounces of this product per acre. Use the higher application rate of 2.0 ounces per acre of this product for control of large established weeds, or when weed growth is heavy or dense.

Addition of a nonionic surfactant to the spray solution at a concentration of 0.25 percent by volume (1 quart per 100 gallons of spray solution) is required for this application.

Sequential applications of this product may be made at a minimum of 30 days between applications, up to a maximum use rate of 2.66 ounces of product per acre per year.

Do not apply this product to newly seeded perennial native grasses prior to the 3-leaf growth stage. Native grasses listed in this section may be reseeded into treated areas, but no sooner than 14 days after treatment.

9.6 Crop Rotation Restrictions

No crop, except wheat, may be planted into pastures, rangelands, or land taken out of the CRP that has been treated with this product within 12 months after application. For all crops, except wheat, a successful field bioassay, as described in this section, must be completed before planting.

Do not seed any crop, except wheat, any sooner than 3 months after the last application of this product. There are no crop rotation restrictions for wheat.

Field Bioassay

To conduct an effective field bioassay, plant strips of the crop you plan to grow the following season in the fields previously treated with this product. Crop response to the bioassay will determine if the crop(s) planted in the test strips can be safely grown in the previously treated fields.

9.7 Non-Crop Tree Sites

This product may be applied as a broadcast application around or over the top of select hardwood and conifer tree species in conservation and wildlife areas to control johnsongrass, tall fescue, purple and yellow nutsedge, and other weed species listed in the **WEEDS CONTROLLED** section of this label.

This product has been shown to provide selective control on the following tree species:

- American Plum
- Bald Cypress
- Bur Oak
- Cottonwood
- Green Ash
- Pecan
- Pin Oak
- Swamp White Oak
- Sycamore
- Walnut

Treated trees must be growing in areas where commercial fruit or nut harvest will not occur. Make over-the-top applications to non-bearing trees only. Treat over the top of transplanted trees after they are well established. Temporary yellowing and growth reduction may occur in some species.

Do not apply by air.

Apply up to 1.33 ounces of this product per acre with a nonionic surfactant concentration of 0.25 percent (1 quart per 100 gallons of spray solution). Sequential applications of this product can be made at a minimum of 21 days between applications, up to a maximum use rate of 2.66 ounces per acre per year.

9.8 Weeds Controlled

Barley, volunteer <i>Hordeum vulgare</i>	Fiddleneck, tarweed <i>Amsinckia lycopsoides</i>
Bedstraw, catchweed <i>Galium aparine</i>	Flixweed <i>Descurainia sophia</i>
Bentgrass, creeping <i>Agrostis stolonifera</i>	Horseweed <i>Conyza canadensis</i>
Bluegrass, bulbous <i>Poa bulbosa</i>	Johnsongrass <i>Sorghum halepense</i>
Bluegrass, roughstalk <i>Poa trivialis</i>	Mustard, tumble <i>Sisymbrium altissimum</i>
Brome, downy <i>Bromus tectorum</i>	Mustard, wild <i>Sinapis arvensis</i>
Brome, rippgut <i>Bromus rigidus</i>	Nutsedge, purple <i>Cyperus rotundus</i>
Buttercup <i>Ranunculus arvensis</i>	Nutsedge, yellow <i>Cyperus esculentus</i>
Chamomile, mayweed <i>Anthemis cotula</i>	Pennycress, field <i>Thlaspi arvense</i>
Cheat <i>Bromus secalinus</i>	Quackgrass <i>Elytrigia repens</i>
Chess, hairy <i>Bromus commutatus</i>	Shepherd's-purse <i>Capsella bursa-pastoris</i>
Chickweed, common <i>Stellaria media</i>	Sunflower, common <i>Helianthus annuus</i>
Cocklebur, common <i>Xanthium strumarium</i>	Tansymustard, pinnate <i>Descurainia pinnata</i>

10.0 WINTER WHEAT AND SPRING WHEAT

Not for use on wheat in California and New York.

Use sites: Winter wheat and spring wheat

Preharvest Interval: Wheat forage may be grazed immediately after application of this product. Do not harvest wheat for hay within 30 days of *Outrider* Herbicide application. Do not harvest wheat for grain within 55 days of application of this product.

Application Equipment and Techniques

Select spray volumes that ensure thorough and uniform weed coverage. Use nozzles that provide optimum spray distribution and coverage at the appropriate spray pressure. Thorough coverage is necessary to provide good weed control without streaking, skips, overlaps, and spray drift during application.

Valent U.S.A. Corporation will not be liable for rotational crop injury resulting from spray overlaps.

Ground Broadcast Application

Apply this product uniformly as a broadcast spray with properly calibrated ground equipment in 5 to 20 gallons of water per acre, or in 10 to 40 gallons of liquid fertilizer solution per acre.

Aerial Application

Apply with aerial equipment in 5 to 15 gallons of water per acre.

Applications in Fluid Fertilizer Carrier

APPLICATION OF THIS HERBICIDE IN LIQUID FERTILIZER SOLUTIONS MAY RESULT IN LEAF BURN AND REDUCED FORAGE GROWTH.

This herbicide provides most consistent performance when applied with water as the spray carrier and surfactant is added to the spray solution. Liquid nitrogen fertilizer solutions (28-0-0 or 32-0-0) may, however, be used as a spray carrier in place of all or part of the water when the label directions are followed.

DO NOT USE IN FERTILIZER SOLUTIONS OF pH 5 OR LESS.

Fall applications of this herbicide in liquid fertilizer solutions may cause rapid leaf burn, resulting in reduced weed control and reduced forage growth.

Fertilizer solutions should contain less than 50 percent liquid nitrogen and not exceed 30 pounds of actual nitrogen per acre.

Nonionic surfactants should be added at 0.25 percent by volume (1 quart per 100 gallons of spray solution) to spray solutions containing fluid fertilizer.

Tank mixtures with Insecticides

This product may be tank-mixed or used sequentially with insecticides labeled for use in wheat, except Malathion. DO NOT USE THIS PRODUCT PLUS MALATHION, AS CROP INJURY MAY RESULT.

Do not use tank mixtures of this product plus insecticides when the wheat crop has significant insect damage, is under drought stress, or when growth is

negatively influenced by other environmental stresses, such as nutrient deficiency, poor soil pH, or disease.

Do not apply this product within 60 days of crop emergence where an organophosphate insecticide has been applied as an in-furrow treatment, as crop injury may result.

10.1 Winter Wheat

When applied to winter wheat as directed in this section, the following weeds are either controlled or suppressed by this product as indicated for either pre-emergence application, postemergence application in the fall, or postemergence application in the spring.

WEED SPECIES	PRE	FALL POST	SPRING POST
Barley, volunteer <i>Hordeum vulgare</i>	C	C	S
Bedstraw, catchweed <i>Galium aparine</i>	S	C	C
Bluegrass, bulbous <i>Poa bulbosa</i>	•	•	C
Bluegrass, roughstalk <i>Poa trivialis</i>	•	C	•
Brome, downy <i>Bromus tectorum</i>	C	C	S
Brome, Japanese <i>Bromus japonicus</i>	C	C	S
Brome, ripgut <i>Bromus rigidus</i>	•	S	S
Chamomile, mayweed <i>Anthemis cotula</i>	•	C	C
Cheat <i>Bromus secalinus</i>	C	C	S
Chess, hairy <i>Bromus commutatus</i>	C	C	S
Chickweed, common <i>Stellaria media</i>	•	S	C
Fiddleneck, tarweed <i>Amsinckia lycopsoides</i>	•	S	S
Flixweed <i>Descurainia Sophia</i>	S	S	S
Henbit <i>Lamium amplexicaule</i>	S	S	•
Lady's-thumb <i>Polygonum persicaria</i>	•	•	S
Mustard, tumble <i>Sisymbrium altissimum</i>	S	C	C
Mustard, wild <i>Sinapis arvensis</i>	C	C	C

(continued)

WEED SPECIES	PRE	FALL POST	SPRING POST
Oat, wild (fall germinating) <i>Avena fatua</i>	•	S	S
Oat, wild (spring germinating) <i>Avena fatua</i>	•	•	S
Pennycress, field <i>Thlaspi arvense</i>	S	S	S
Quackgrass <i>Elytrigia repens</i>	•	•	C
Rescuegrass <i>Bromus catharticus</i>	•	S	S
Ryegrass, Italian <i>Lolium multiflorum</i>	•	S	S**
Shepherd's-purse <i>Capsella bursa-pastoris</i>	•	•	C
Tansymustard, pinnate <i>Descurainia pinnata</i>	S	S	S
Wallflower, bushy <i>Erysimum repandum</i>	•	C	C

**Spring application will provide suppression only in WA, ID, OR.

C = Control S = Suppression
• = Not Controlled or Suppressed

This product can be applied in winter wheat either as a single preemergence application, a single post-emergence application, or as a split postemergence application to control or suppress the weeds listed in this section. Best weed control is obtained when soil moisture is adequate to support vigorous wheat and weed growth.

Choose one of the following application scenarios.

Preemergence in Winter Wheat

Apply *Outrider* Herbicide preemergence to winter wheat at 2/3 ounce of product per acre in a single application. Preemergence applications of *Outrider* Herbicide should be applied after drilling wheat but before wheat or weed emergence. Do not use pre-emergence application if dry soil conditions will cause delayed wheat and/or weed emergence. Preemergence applications under dry soil conditions can:

- 1.) Increase the risk of wheat injury due to slow and inconsistent winter wheat germination and growth prior to winter dormancy. (If winter wheat does not reach the 3-leaf stage prior to winter dormancy, a negative crop response the following spring can be expected.)
- 2.) Result in poor weed control performance.
- 3.) Make this product vulnerable to wind erosion until fall moisture is received.

and weed growth, and prior to jointing stage (Feekes' scale 6). Use a nonionic surfactant at a concentration of 0.5 percent by volume (2 quarts per 100 gallons of spray solution) with this postemergence application.

Do not apply this product postemergence to durum wheat.

For wild oat control, apply 2/3 ounce of this product per acre when wild oat are in the 1 to 4 true leaf stage.

Tank Mixtures for Spring Wheat

For additional broadleaf weed control, this product may be applied to spring wheat in a tank mixture with the following herbicides:

- 2,4-D amine^{1,2}
- 2,4-D LV ester²
- Bronate (bromoxynil + MCPA)
- Buctril (bromoxynil)
- Buctril 4EC
- Cheyenne
- Curtail (clopyralid + 2,4-D)¹
- Dakota (fenoxaprop + MCPA)
- MCPA amine^{1,2}
- MCPA LV ester²
- Puma (fenoxaprop)
- Stinger (clopyralid)
- Tiller (fenoxaprop + 2,4-D + MCPA)

¹ Tank mixtures with this herbicide may result in reduced control of grass species.

² Tank mixtures with this herbicide may be made provided the specific product is registered for this use.

10.3 Crop Rotation

No crop other than wheat may be planted sooner than 3 months after application of this product.

The following tables provide crop rotation intervals (months) for selected crops based on soil pH and cumulative precipitation by geographic region. For soils with pH higher than listed or for cumulative precipitation less than listed, a successful field bioassay must be completed before planting, as described in this section under **Field Bioassay**. If a shorter rotation interval other than that listed for a crop is desired, a successful field bioassay must be completed before planting.

All crops other than those listed in these tables may be seeded into fields treated with this product only after the completion of a successful field bioassay.

Field Bioassay

To conduct an effective field bioassay, plant strips of the crop you plan to grow the following season in fields previously treated with this product. Crop response will determine if the crop(s) planted in the test strips can be adequately grown in these areas.

Table 1 - OK, KS, NE, TX

Crop	Soil pH	Cumulative Precipitation (Inches)	Rotation Interval (Months)
Millet	< 7.5	18	3
Corn – IR	< 7.5	18	3
Soybean – STS	< 7.5	18	3
Winter Canola (varieties that exhibit tolerance to sulfonyleurea herbicides)	< 7.5	18	3
Corn – normal	< 7.5	30	12
Cotton	< 7.5	30	12
Soybean	< 7.5	30	12
Sorghum (grain)	6.0 - 7.5	30	22
Sunflower	< 6.0	30	17
Winter Canola (varieties that do not exhibit tolerance to sulfonyleurea herbicides)	6.0 - 7.5	30	22

Table 2 - WA, OR, ID

Crop	Soil pH	Cumulative Precipitation (Inches)	Rotation Interval (Months)
Millet	< 7.5	18	3
CLEARFIELD Canola	< 7.5	18	3
Corn – IR	< 7.5	18	3
Soybean – STS	< 7.5	18	3
Potato	< 7.5	18	12
Barley	< 7.5	24	22
Canola	< 7.5	24	22
Corn – normal	< 7.5	24	22
Lentils	< 7.5	24	22
Peas* – all classes (including chickpeas)	> 6.5 < 6.5	24 30	22 17
Soybean	< 7.5	24	22

* Peas should not be planted on clay or eroded hillsides treated with *Outrider* Herbicide without conducting a field bioassay as described in this section.

Table 3 - CO, SD, WY

Crop	Soil pH	Cumulative Precipitation (Inches)	Rotation Interval (Months)
Millet	< 7.5	18	3
Corn – IR	< 7.5	18	3
Soybean – STS	< 7.5	18	3
Corn – normal	< 7.5	24	22
Soybean	< 7.5	24	22
Sorghum (grain)	6.5 - 7.5	45	34
Sunflower	< 6.5	35	22

Table 4 - MT, ND

Crop	Soil pH	Cumulative Precipitation (Inches)	Rotation Interval (Months)
CLEARFIELD Canola	< 7.5	12	12

Table 5 - All Other Regions

Crop	Soil pH	Cumulative Precipitation (Inches)	Rotation Interval (Months)
Soybean – STS	< 6.5	30	3
Soybean	< 6.5 < 7.5	30 24	5 12

11.0 LIMIT OF WARRANTY AND LIABILITY

This Company warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes set forth in the Complete Directions for Use label pamphlet (“Directions”) when used in accordance with those Directions under the conditions described therein. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, 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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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.

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