

# **TURFGRASS RENOVATION, SEED OR SOD PRODUCTION - ANNUAL WEEDS**

General Information

## **PRODUCT INFORMATION**

How this product works

**Product Description:** This product is a postemergent, systemic herbicide with no soil residual activity. It is generally non-selective and gives broad-spectrum control of many annual weeds, perennial weeds, woody brush and trees. It is formulated as a water-soluble liquid. It may be applied through most standard industrial or field-type sprayers after dilution and thorough mixing with water or other carriers according to label instructions.

**Time to Symptoms:** This product moves through the plant from the point of foliage contact to and into the root system. Visible effects on most annual weeds occur within 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.

**Stage of Weeds:** Annual weeds are easiest to control when they are small. Best control of most perennial weeds is obtained when treatment is made at late growth stages approaching maturity. Refer to the "ANNUAL WEEDS", "PERENNIAL WEEDS" and "WOODY BRUSH AND TREES RATE TABLES" for rates for specific weeds.

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

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

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

annual or perennial weeds that have been mowed, grazed, or cut, and have not been allowed to regrow to the specified stage for treatment.

**Mode of Action:** The active ingredient in this product inhibits an enzyme found only in plants and microorganisms that is essential to formation of specific amino acids.

**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 and will continue to grow.

**Biological Degradation:** Degradation of this product is primarily a biological process carried out by soil microbes.

**Annual Maximum Use Rate:** Except as otherwise specified in a crop section of the label, the combined total of all treatments must not exceed 8 quarts of this product per acre per year. For applications in non-crop sites or in tree, vine, or shrub crops, the combined total of all treatments must not exceed 10.6 quarts of this product per acre per year. The maximum use rates stated throughout this product's labeling apply to this product combined with the use of all other herbicides containing glyphosate or sulfosate as the active ingredient, whether applied as mixtures or separately. Calculate the application rates and ensure that the total use of this and other glyphosate or sulfosate containing products does not exceed stated maximum use rate.

**NOTE:** Use of this product in any manner not consistent with the label may result in injury to persons, animals or crops, or other unintended consequences.

## WEED RESISTANCE MANAGEMENT

Information on Weed Resistance - GROUP 9 HERBICIDE Glyphosate, the active ingredient in this product, is a Group 9 herbicide. Target site resistance to Group 9 herbicides is rare. Although rare in occurrence, any weed population may contain plants naturally resistant to Group 9 herbicides. Weed species resistant to Group 9 herbicides may be effectively managed utilizing another herbicide from a different Group or using other cultural practices. Weed resistance management directions for Group 9 herbicides are: \* Ensure optimum weed control by making applications at the right time (correct weed size) and utilizing the label rate for the most difficult to

control weed in your field.\* Base decisions on local needs and use the tool(s) necessary to obtain optimum weed control and minimize weed escapes.\* Avoid tank-mixtures that reduce this product's efficacy (through antagonism) or which encourage rates of this product below the label directions.\* Scout treated weed populations for escapes 2-4 weeks after application.\* Report any incidence of repeated nonperformance of this product on a particular weed to the local retailer, county extension agent, or Tenkoz representative.

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

#### APPLICATION EQUIPMENT AND TECHNIQUES

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

This product may be applied with the following application equipment:

Aerial—Fixed Wing and Helicopter

Ground Broadcast Spray—Boom or boomless systems, pull-type sprayer, floaters, pick-up sprayers, spray coupes and other ground broadcast equipment.

Hand-Held or High-Volume Spray Equipment—Knapsack and backpack sprayers, pump-up pressure sprayers, handguns, handwands, mistblowers\*, lances and other hand-held and motorized spray equipment used to direct the spray onto weed foliage. \*This product is not registered in California or Arizona for use in mistblowers.

Selective Equipment—Recirculating sprayers, shielded and hooded sprayers, wiper applicators and sponge bars.

Injection Systems—Aerial or ground injection sprayers.

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

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

Aerial Equipment

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

Use the specified rates of this herbicide in 3 to 15 gallons of water per acre unless otherwise directed on the label. Unless otherwise specified, do not exceed 1 quart per acre. Refer to the individual use area sections of the label for specified volumes, application rates, and further instructions.

#### State Information on Aerial Applications

##### Aerial Applications in ARKANSAS:

AVOID DRIFT. DO NOT APPLY INTO STILL AIR WHERE THERE IS A TEMPERATURE INVERSION LAYER LOW ENOUGH FOR FINE SPRAY PARTICLES TO BECOME SUSPENDED AND MOVE OUTSIDE THE TARGET AREA WHEN THE INVERSION LAYER MOVES. DO NOT APPLY WHEN WINDS ARE GUSTY OR UNDER ANY OTHER CONDITION THAT FAVORS DRIFT. DRIFT IS LIKELY TO CAUSE DAMAGE TO ANY VEGETATION CONTACTED. TO PREVENT INJURY TO ADJACENT DESIRABLE VEGETATION, APPROPRIATE BUFFER ZONES MUST BE MAINTAINED.

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

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

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

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

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

Do not apply this product when winds are in excess of 10 miles per hour.

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

when applications are made near crops or other desirable vegetation:

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

See label for additional application information in the States of Arkansas and California.

Refer to the label for Aerial Application in the State of Arkansas and for Glyphosate Weed Resistance Management.

Limitations, Restrictions, and Exceptions

#### TURFGRASS RENOVATION, SEED OR SOD PRODUCTION

**USE INSTRUCTIONS:** This product controls most existing vegetation prior to renovating turfgrass areas or establishing turfgrass grown for seed or sod. For maximum control of existing vegetation, delay planting or sodding 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.

Desirable turfgrasses may be planted following the above procedures.

Hand-held equipment may be used for spot treatment of unwanted vegetation growing in existing turfgrass. Broadcast or hand-held equipment may be used to control sod remnants or other unwanted vegetation after sod is harvested.

## ANNUAL WEEDS

Apply to actively growing annual weeds. Annual weeds are generally easiest to control when they are small.

Older, mature (hardened) annual weed species may require higher rates even if they meet the size requirements.

Do not tank mix with soil residual herbicides when using these rates unless otherwise specified.

For weeds that have been mowed, grazed or cut, allow regrowth to occur prior to treatment.

- Brome, downy: For control of downy brome in no-till systems, use 24 fluid ounces per acre.
- Brome, downy, Cheat, Wheat: Performance is better if application is made before this weed reaches the boot stage of growth.
- Buckwheat, wild: Use 24 fluid ounces per acre of this product to control wild buckwheat in the cotyledon to 2-leaf stage. Use 32 fluid ounces per acre to control 2- to 4-leaf wild buckwheat. For improved control of wild buckwheat over 2 inches in size, use sequential treatments of 32 fluid ounces followed by 32 fluid ounces of this product per acre.
- Kochia: Do not treat kochia in the button stage.
- Thistle, Russian: Control of Russian Thistle may vary based on environmental conditions and spray coverage. Whenever possible, a tank mixture with 2,4-D as described on the label may improve control.

Method

[Broadcast/Foliar Air](#)

[Broadcast/Foliar Ground](#)

[Spot treatment](#)

[Hand-Held Spray](#)

Rates

[field rates 0](#)

[field rates 1](#)

[field rates 2](#)

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Restricted Entry Interval

4 hours

Timings

[Postemergence \(Weed\)](#)