

# **TURF GRASS SOD PRODUCTION - PERENNIAL WEEDS**

## General Information

### USE INFORMATION

**PRODUCT DESCRIPTION:** This product is a post-emergent, 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.

Ammonium sulfate, drift control additives, or dyes and colorants may be used. See the "MIXING" section of the label for instructions.

Refer to the supplemental label for Aerial Application Restrictions in Mississippi.

**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 aboveground 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, perennial, woody brush and trees rate tables for recommendations for specific weeds.

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

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

**MODE OF ACTION:** The active ingredient in this product inhibits an enzyme found only in plants 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.

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

**ANNUAL MAXIMUM USE RATE:** Except as otherwise specified in a food crop section of the label, the combined total of all treatments must not exceed 8 quarts of this product per acre per year. For non-food/non-crop uses, 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. Keep container closed to prevent spills and contamination.

## WEED RESISTANCE MANAGEMENT

Glyphosate, the active ingredient in this product, is a Group 9 herbicide. Target site resistance to Group 9 herbicides is rare. 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 or mechanical practices.

## WEED MANAGEMENT DIRECTIONS

To minimize the occurrence of glyphosate-resistant biotypes, observe the following weed management recommendations:

- Scout your fields before and after herbicide applications.
- Start with a clean field, use either a burndown herbicide application or tillage.
- Control weeds early when they are relatively small.
- Add other herbicides (e.g., a selective and/or a residual herbicide) and cultural practices (e.g., tillage or crop rotation) where appropriate.
- One method of adding other herbicides into a continuous Roundup Ready system is to rotate to other Roundup Ready crops.
- Utilize the labeled rate for the most difficult-to-control weed in your field. Avoid tank mixtures with other herbicides that reduce this product's efficacy (through antagonism), or tank mixture recommendations that encourage application rates of this product below the label recommendations.

- Control weed escapes and prevent weeds from setting seeds.
- Clean equipment before moving from field to field to minimize the spread of weed seed or plant parts.
- 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 Albaugh, Inc. representative, local retailer, or county extension agent.

#### MANAGEMENT DIRECTIONS FOR GLYPHOSATE-RESISTANT BIOTYPES

Note: Appropriate testing is critical in order to determine if a weed is resistant to glyphosate. Contact your Albaugh, Inc. representative to determine if resistance has been confirmed to any particular weed biotype in your area, or visit on the Internet at [www.weedresistancemanagement.com](http://www.weedresistancemanagement.com) or [www.weedscience.org](http://www.weedscience.org). For more information see the “ANNUAL WEEDS RATE” section and “PERENNIAL WEEDS RATE” section of the label.

Control directions for biotypes confirmed as resistant to glyphosate are made available on separately published supplemental labeling or fact sheets for this product and can be obtained from your local retailer or Albaugh, Inc. representative.

Since the occurrence of new glyphosate-resistant weeds cannot be determined until after product use and scientific confirmation, Albaugh, Inc. is not responsible for any losses that may result from the failure of this product to control glyphosate-resistant weed biotypes.

The following good agronomic practices are recommended to reduce the spread of confirmed glyphosate-resistant biotypes:

- If a naturally occurring resistant biotype is present in your field, this product should be tank-mixed or applied sequentially with an appropriately labeled herbicide with a different mode of action to

achieve control.

- Cultural and mechanical control practices (e.g., crop rotation or tillage) may also be used as appropriate.

- One method for adding other herbicides into a continuous Roundup Ready system is to rotate to other Roundup Ready crops.
- Scout treated fields after herbicide applications and control escaping weeds including resistant biotypes before they set seed.
- Thoroughly clean equipment before leaving fields known to contain resistant biotypes.

## 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.

## 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 labeled amount of this product near the end of the filling process and mix well. Use caution to avoid siphoning back into the carrier source. Use approved anti-back-siphoning devices where required by State or local regulations. 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 de-foaming agent.

## 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.

- Selective Equipment – 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.

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

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. FOR AERIAL APPLICATION IN CALIFORNIA AND ARKANSAS, REFER TO INSTRUCTIONS SPECIFIC TO THOSE STATES.

This product plus dicamba tank mixtures may not be applied by air in California.

Use the specified rates of this herbicide in 3 to 15 gallons of water per acre unless otherwise specified on the label. Unless otherwise specified, do not exceed 1 quart per acre. Aerial applications of this product may be made in annual cropping conventional tillage systems, fallow and reduced tillage systems and preharvest applications. Refer to the individual use area sections of the label for labeled volumes and application rates.

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

#### FOR AERIAL APPLICATION IN CALIFORNIA ONLY

Aerial applications of this product are allowed in the following situations:

1. In fallow and reduced tillage systems prior to the emergence or transplanting of labeled crops.
2. In alfalfa and pasture renovation applications.
3. Over-the-top applications in Roundup Ready corn and cotton.
4. Preharvest in alfalfa, corn, cotton, wheat, Roundup Ready corn and Roundup Ready cotton.

Do not plant subsequent crops other than those listed in the label booklet for 30 days following application.

When tank mixing this product with 2,4-D for aerial applications, only 2,4-D amine formulations may be used. This tank mixture may be used for fallow and reduced tillage systems and alfalfa and pasture renovation applications only.

DO NOT EXCEED A MAXIMUM RATE OF 2 QUARTS PER ACRE OF THIS PRODUCT WHEN MAKING APPLICATIONS BY AIR IN FALLOW AND REDUCED TILLAGE SYSTEMS AND ALFALFA AND PASTURE RENOVATION APPLICATIONS.

DO NOT EXCEED A MAXIMUM RATE OF 1 QUART PER ACRE OF THIS PRODUCT WHEN MAKING APPLICATIONS BY AIR IN ALFALFA, CORN, COTTON, WHEAT, ROUNDUP READY CORN AND ROUNDUP READY COTTON PRIOR TO HARVEST. THIS RESTRICTION ALSO APPLIES TO OVER-THE-TOP APPLICATIONS IN ROUNDUP READY CORN AND COTTON.

#### Aerial Equipment

Use the labeled rates of this product in 3 to 15 gallons of water per acre.

Use the following guidelines when aerial applications are made near crops or desirable perennial vegetation after bud break and before total leaf drop, and/or near other desirable vegetation or annual crops.

1. Do not apply within 100 feet of all desirable vegetation or crop(s).
2. If wind up to 5 miles per hour is blowing toward desirable vegetation or crop(s), do not apply within 500 feet of the desirable vegetation or crop(s).
3. Winds blowing from 5 to 10 miles per hour toward desirable vegetation or crop(s)

may require buffer zones in excess of 500 feet.

4. Do not apply when winds are in excess of 10 miles per hour or when inversion conditions exist.

#### FOR AERIAL APPLICATION IN FRESNO COUNTY, CALIFORNIA

(Only From February 15 through March 31 Only)

##### Applicable Area:

The area contained inside the following boundaries within Fresno County, California.

North: Fresno County line

South: Fresno County line

East: State Highway 99

West: Fresno County line

##### Use Information:

Always read and follow the label directions and precautionary statements for all products used in the aerial application.

Observe the following directions to minimize off-site movement during aerial application of this product. Minimization of off-site movement is the responsibility of the grower, Pest Control Advisor and aerial applicator.

##### Written Recommendations:

A written recommendation MUST be submitted by or on behalf of the applicator to the Fresno County Agricultural Commissioner 24 hours prior to the application. This written recommendation MUST state the proximity of surrounding crops, and that conditions of each manufacturer's product label and the label have been satisfied.

##### Aerial Applicator Training and Equipment:

Aerial application of this product is limited to pilots who have successfully completed a Fresno County Agricultural Commissioner and California Department of Pesticide Regulation approved training program for aerial application of herbicides.



All aircraft must be inspected, critiqued in flight and certified at a Fresno County Agricultural Commissioner approved fly-in. Test and calibrate spray equipment at intervals sufficient to ensure that proper rates of herbicides and adjuvants are being applied during commercial use. Applicator must document such calibrations and testing. Demonstration of performance at Fresno County Agricultural Commissioner approved fly-ins constitutes such documentation, or other written records showing calculations and measurements of flight and spray parameters acceptable to the Fresno County Agricultural Commissioner.

#### Applications at Night:

Do not apply this product by air earlier than 30 minutes prior to sunrise and/or later than 30 minutes after sunset without prior permission from the Fresno County Agricultural Commissioner.

Note: For aerial application from April 1 through February 14, refer to the “For Aerial Application in California Only” section of the label.

#### FOR AERIAL APPLICATION IN ARKANSAS ONLY

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 specified 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% of the length of the wingspan or rotor. In many cases, reducing this distance to 65% 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 airstream 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 wind speeds 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 mph.

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.

## GROUND BROADCAST EQUIPMENT

Use the specified 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 labeled 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.

## 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 must be uniform and complete. Do not spray to the point of runoff. Use coarse sprays only. For labeled rates and timing, refer to the "ANNUAL WEEDS - HAND-HELD OR HIGH-VOLUME EQUIPMENT" section of the label.

## SELECTIVE EQUIPMENT

This product may be applied through shielded applicators, hooded sprayers, wiper applicators or sponge bars after dilution and thorough mixing with water to listed weeds growing in any non-crop site specified on the label.

In cropping systems, hooded sprayers, shielded sprayers, and wipers may be used in row middles (in between rows of crop plants) where any dripping or leaking will not contact crop foliage. Such equipment must be capable of preventing all crop contact with herbicide solutions and operated without leakage of spray mists or dripping onto crop. Wipers over-the-top of crops may be used only when specifically labeled in this product's labeling.

## AVOID CONTACT OF HERBICIDE WITH DESIRABLE VEGETATION.

Contact of the herbicide solution with desirable vegetation may result in damage or destruction. Applicators used above desirable vegetation must 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 may result in discoloration, stunting or destruction.

Applications made above the crops should be made when the weeds are a minimum of 6 inches above the desirable vegetation. 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

When applied under the conditions described in the following paragraphs for shielded and hooded applications, this product at labeled rates will control those

weeds listed in the “ANNUAL WEEDS RATE TABLE” and “PERENNIAL WEEDS RATE TABLE” sections of the label. A hooded sprayer is a type of shielded applicator where the spray pattern is fully enclosed including top, sides, front and back, thereby shielding the crop from the spray solution. Keep shields on these sprayers adjusted to protect desirable vegetation. When applying to crops grown on raised beds, ensure that the hood is designed to completely enclose the spray solution. If necessary, extend the front and rear flaps of the hoods to reach the ground in deep furrows. **EXTREME CARE MUST BE EXERCISED TO AVOID CONTACT OF HERBICIDE WITH DESIRABLE VEGETATION.**

This equipment must be set up and operated in a manner that avoids bouncing or raising the hoods off the ground in any way. If the hoods are raised, spray particles may escape and come into contact with the crop, causing damage or destruction of the crop. Avoid operation on rough or sloping ground where the spray hoods might be raised off the ground.

Use hoods designed to minimize excessive dripping or runoff down the insides of the hoods. A single, low pressure/low drift flat-fan nozzle with an 80 to 95 degree spray angle positioned at the top center of the hood is recommended. Minimum spray volume must be 20 to 30 gallons per acre.

These procedures will reduce the potential for crop injury:

- The spray hoods must be operated on the ground or skimmed across the ground.
- Leave at least an 8 inch untreated strip over the drill row. For example, if the crop row width is 38 inches, the maximum width of the spray hood should be 30 inches.
- Maximum tractor speed: 5 miles per hour to avoid bouncing of the spray hoods.
- Maximum wind speed: 10 miles per hour.
- Use low-drift nozzles that provide uniform coverage within the treated area.

Crop injury may occur when the foliage of treated weeds comes into direct contact with leaves of the crop. Do not apply this product when the leaves of the crop are growing in direct contact with weeds to be treated. Droplets, mist, foam or splatter of the herbicide solution may contact the crop and cause discoloration, stunting or destruction.

EXTREME CARE MUST BE EXERCISED TO AVOID CONTACT OF HERBICIDE WITH DESIRABLE VEGETATION.

## WIPER APPLICATORS

When applied under the conditions described in the following paragraphs, this product CONTROLS many weeds, including volunteer corn, Texas panicum, common rye, shattercane, sicklepod, Spanish needles and bristly starbur: and SUPPRESSES many weeds including Florida beggarweed, Bermuda grass, hemp dogbane, dogfennel, guineagrass, johnsongrass, milkweed, silverleaf nightshade, redroot pigweed, giant ragweed, smutgrass, sunflower, Canada thistle, musk thistle, vaseygrass and velvetleaf.

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

Equipment must be designed, maintained and operated to prevent the herbicide solution from contacting desirable vegetation. Operate this equipment at ground speeds no greater than 5 mph.

Performance may be improved by reducing speed in areas of heavy weed infestations to ensure adequate wiper saturation. Better results may be obtained if 2 applications are made in opposite directions.

Avoid leakage or dripping onto desirable vegetation. Adjust height of applicator to ensure adequate contact with weeds. Keep wiping surfaces clean. Be aware that, on sloping ground, the herbicide

solution may migrate, causing dripping on the lower end and drying of the wicks on the upper end of a wiper applicator.

Do not use wiper equipment when weeds are wet.

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

Do not add surfactant to the herbicide solution.

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 above in this section.

For Panel Applicators – Solutions ranging from 33 to 100 percent of this product in water may be used in panel wiper applicators.

## 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.

## CONTROLLED DROPLET APPLICATION (CDA) EQUIPMENT

The rate of this product applied per acre by vehicle-mounted CDA equipment must not be less than the amount labeled in the label when applied by conventional broadcast equipment. For vehicle mounted CDA equipment, apply 3 to 20 gallons of water per acre.

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

Controlled droplet application equipment produces a spray pattern which is not easily visible. Extreme care must be exercised to avoid spray or drift contacting the foliage or any other green tissue of desirable vegetation, as damage or destruction may result.

## ANNUAL AND PERENNIAL CROPS.

## USE DIRECTIONS

Apply this product during fallow intervals preceding planting, prior to planting or transplanting, at planting, or pre-emergent to annual and perennial crops listed in the label, except where specifically

limited. For any crop NOT listed in the label, applications must be made at least 30

days prior to planting. UNLESS OTHERWISE SPECIFIED, WEED CONTROL APPLICATIONS MAY BE MADE ACCORDING TO THE RATES LISTED IN “ANNUAL WEEDS”, PERENNIAL WEEDS”, AND “WOODY BRUSH AND TREES” RATE TABLES IN THE LABEL. Repeat applications may be made up to a maximum of 8 quarts per acre per year.

Post-directed hooded sprayers and wiper equipment capable of preventing all crop contact with herbicide solutions may be used in mulched or unmulched row middles after crop establishment. Where specifically noted below, wipers may also be used above certain crops to control tall weeds. Refer to the “SELECTIVE EQUIPMENT” section of the label for essential precautions when using hooded sprayers or wipers to avoid crop injury caused by leakage of spray mists or dripping onto crops. Crop injury is possible with these applications and shall be the sole responsibility of the applicator.

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.

## PRECAUTIONS

- Avoid contact of herbicide with foliage, green shoots or stems, bark, exposed roots (including those emerging from plastic mulch), or fruit of crops because severe injury or destruction may result.
- Apply before seed germination in coarse sandy soils to further minimize the risk of injury.

## RESTRICTIONS

- Unless otherwise specified in this product’s labeling, treatments with selective equipment including wipers and hooded sprayers must be made at least 14 days prior to harvest.
- In crops where spot treatments are allowed, do not treat more than 10 percent of the total field to be harvested. The crop receiving spray in treated area will be

killed. Take care to avoid drift or spray outside the target area for the same reason.

- When making pre-emergence and at-planting applications, applications must be made before crop emergence to avoid severe crop injury. Broadcast applications made at emergence will result in injury or death to emerged seedlings.
- Post-harvest or fallow applications must be made at least 30 days prior to planting any non-labeled crop.
- For broadcast post-emergent treatments, do not harvest or feed treated vegetation for 8 weeks following application, unless otherwise specified.

## ROUNDUP READY CROPS

The following instructions or those separately published on Albaugh, Inc. Supplemental labeling include all applications which can be made onto the specified Roundup Ready crops during the complete cropping season. DO NOT combine these instructions with other recommendations made for crop varieties that do not contain the Roundup Ready gene, in the "ANNUAL AND PERENNIAL CROPS (Alphabetical)" section of the label.

THIS PRODUCT IS TO BE USED FOR POSTEMERGENCE APPLICATION ONLY ON CROP VARIETIES DESIGNATED AS CONTAINING A ROUNDUP READY GENE OR GLYPHOSATE-TOLERANT GENE.

Applying this product to crop varieties that are not designated as glyphosate tolerant will result in severe crop injury and yield loss. Avoid contact with foliage, green stems, or fruit of crops, or any desirable plants that do not contain a Roundup Ready or glyphosate tolerant gene, since severe injury or destruction will result.

The Roundup Ready designation indicates that the crop variety contains a patented gene that provides tolerance to this product. Information on Roundup Ready crop varieties may be obtained from your seed supplier. Roundup Ready crop varieties must be purchased from an authorized licensed seed supplier.

NOTE: Roundup Ready seed, and the method of selectivity controlling weeds using glyphosate on a Roundup Ready crop, are protected under several U.S. Patents. A license to use Roundup Ready seed must be obtained prior to use.

For Ground Applications with broadcast equipment, apply this product in 5 to 20



gallons of spray solution per acre. Carefully select proper nozzle and spray pressure to avoid spraying a fine mist. For best results with ground application equipment use flat spray nozzles. Check for even distribution of spray droplets.

For Aerial Applications apply this product in 3 to 15 gallons of water per acre. See the “APPLICATION EQUIPMENT AND TECHNIQUES” section of the label for procedures to avoid spray drift that may cause injury to any vegetation not intended for treatment. Use of appropriate buffer zones will help prevent injury to adjacent vegetation.

**ATTENTION: AVOID DRIFT. EXTREME CARE MUST BE USED WHEN APPLYING THIS PRODUCT TO PREVENT INJURY TO DESIRABLE PLANTS AND CROPS WHICH DO NOT CONTAIN A GLYPHOSATE TOLERANT GENE.**

See the “MIXING” and “APPLICATION EQUIPMENT AND TECHNIQUES” sections of the label for additional directions and restrictions on the application of this product.

NOTE: The following recommendations are based on a clean start at planting by using a burndown application or tillage to control existing weeds before crop emergence. In no-till and stale seedbed systems, a preplant burn-down treatment of this product is recommended to control existing weeds prior to crop emergence. Some weeds, such as black nightshade, broadleaf signalgrass, sicklepod, Texas panicum, sandbur, annual morningglory, woolly cupgrass, shattercane, wild proso millet, burcucumber, and giant ragweed with multiple germination times or suppressed (stunted) weeds may require a second application of this product for complete control. The second application should be made after some regrowth has occurred and at least 10 days after a previous application of this product.

Refer in the label for tank mix information.

Refer to the supplemental label for Aerial Application Restrictions in the state of Mississippi.

Refer to the supplemental label for seed potato precaution.

Limitations, Restrictions, and Exceptions

TURF GRASS SOD PRODUCTION

## USE DIRECTIONS

This product controls most existing vegetation prior to renovating turf grass areas or establishing turf grass grown for sod. Broadcast or hand-held equipment may be used to control sod remnants or other unwanted vegetation after sod is harvested. 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.

MAKE APPLICATIONS ACCORDING TO THE RATES LISTED IN “ANNUAL WEEDS”, “PERENNIAL WEEDS”, AND “WOODY BRUSH AND TREES” RATE TABLES IN THE LABEL.

Desirable turfgrasses may be planted following the above procedures.

## RESTRICTIONS

If application rates total 3 quarts per acre or less, no waiting period between treatment and feeding or livestock grazing is required. If the rate is greater than 3 quarts per acre, remove domestic livestock and wait 8 weeks following application before grazing or harvesting.

Do not disturb soil or underground plant 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.

Spot treatment

## USE DIRECTIONS

Hand-held equipment may be used for spot treatment of unwanted vegetation growing in existing turf grass

Turfgrass Renovation for sod production

## USE DIRECTIONS

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. 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.

Desirable turfgrass 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.

## RESTRICTIONS

Do not feed or graze turfgrass grown for seed or sod production for 8 weeks following application.

## PERENNIAL WEEDS

Apply to actively growing perennial weeds.

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

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

Unless otherwise stated, allow 7 or more days after application before tillage.

Do not treat when weeds are under drought stress as good soil moisture is

necessary for active growth.

Refer in the label for specific weed information and rates.

#### Method

[Broadcast/Foliar Air](#)

[Broadcast/Foliar Ground](#)

[Spot treatment](#)

[Wiper application](#)

[Directed](#)

[Hand-Held Spray](#)

[Broadcast/Foliar Air](#)

[Broadcast/Foliar Ground](#)

[Spot treatment](#)

[Wiper application](#)

[Directed](#)

[Hand-Held Spray](#)

[Broadcast/Foliar Air](#)

[Broadcast/Foliar Ground](#)

[Spot treatment](#)

[Wiper application](#)

[Directed](#)

[Hand-Held Spray](#)

#### Rates

[field\\_rates 0](#)

[field\\_rates 1](#)

- 

#### Restricted Entry Interval

4 hours

#### Timings

[Preemergence \(Crop\)](#)

[Preplant](#)

[Postemergence \(Weed\)](#)