

TURFGRASS SCIENCE

at the University of Tennessee

Dallisgrass (*Paspalum dilatatum*)

Greg Breeden, Weed Science Extension Assistant
James T. Brosnan, Assistant Professor, Turfgrass Weed Science
Plant Sciences

Introduction

Dallisgrass (*Paspalum dilatatum*) is arguably one of the most difficult-to-control turfgrass weeds in Tennessee. Multiple herbicide applications, over a two-year period, are required to provide adequate control. As a general rule, the longer dallisgrass has been established, the more difficult it will be to control.

Dallisgrass Identification

Dallisgrass is a coarse-textured, clumping, perennial grass that spreads from short, thick rhizomes and seed. Dallisgrass has a distinct grayish-green color (Figure 1), a membranous ligule, and a few sparse hairs on the leaf collar. Hairs may be present at the base of the leaf blade as well. Leaves are smooth, rolled in veneration, and have a prominent mid-rib (Figure 2). This mid-rib helps distinguish dallisgrass from other coarse-textured grassy weeds like crabgrass (*Digitaria spp.*) and foxtail (*Setaria spp.*). Dallisgrass seedheads are easily identifiable

(Figure 3). Hairy spikelets are arranged in four rows on 3-7 alternating branches (Figure 4). Dallisgrass will begin to produce seed as early as mid-June in Tennessee. Once used exclusively as a forage, dallisgrass is now a weed problem on lawns, golf courses and other turf areas statewide.



Figure 1. Dallisgrass is a clumping, perennial grassy weed.

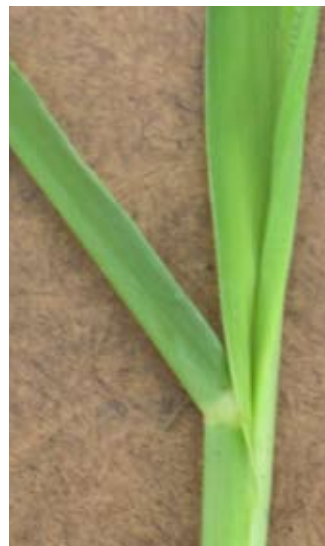


Figure 2. Dallisgrass leaf veneration



Figure 3. Hairs protruding from dallisgrass spikelet



Figure 4. Dallisgrass seedhead

Table 1. Herbicide programs to control dallisgrass in bermudagrass and tall fescue turf

Options for control in Bermudagrass	Active Ingredient (Trade Name Ex.)	Formulations	Rate/a	Comments
MSMA Programs				
	MSMA (MSMA)	Various	2 lb ai	Apply every 7-10 days for a maximum of four applications in a season. Yearly application total of 8 lb ai/a.
	MSMA (MSMA) + metribuzin (Sencor)	Various + 75DF	2 + 0.5 lb ai	Apply every 10-14 days for a maximum of three applications in a season. An additional application of MSMA can be applied 14 days after the last application to improve control. Applying Sencor at intervals of less than 10 days could injure bermudagrass.
Sulfonylurea Programs				
	foramsulfuron (Revolver)	0.19SC	17.4-26.2 fl. oz	Apply as a spot application 7-14 days apart. Better results are achieved when MSMA is applied prior to application.
	sulfosulfuron (Certainty)	75WG	0.94-1.5 oz ai	Apply treatments in a rotation with MSMA for better control. Apply as a spot treatment for better results.
	trifloxysulfuron (Monument)	75WG	0.397 oz ai	Apply treatments in a rotation with MSMA for better control. Apply as a spot treatment for better results.
Glyphosate Programs				
	glyphosate (Roundup Pro, others)	Various	1.5 lb ai	Apply after bermudagrass is totally dormant and dallisgrass leaves are still green in color. Timing is critical for this application. Follow up in the spring with other dallisgrass control options.
Options for control in Tall Fescue				
MSMA Programs				
	MSMA (MSMA)	Various	1 lb ai	Allow a minimum of 14 days between applications. Yearly application total of 8 lb ai/a. Control will be lower than that achieved with the bermudagrass use rate. Injury should be expected when applying MSMA to tall fescue. Do not apply if tall fescue is under drought stress.
Fluazifop Programs				
	fluazifop (Fusilade II)	2L	0.09 lb ai	Apply at 3-4 week intervals for dallisgrass management. Make the initial application when dallisgrass is breaking dormancy. Do not apply Fusilade II if tall fescue is under stress.
	fluazifop (Fusilade II) + mesotrione (Tenacity)	2L + 4L	0.09 + 0.25lb ai	Apply at 3-4 week intervals for dallisgrass management. Make the initial application when dallisgrass is breaking dormancy. Do not apply Fusilade II if tall fescue is under stress.
Glyphosate Spot Treatment Programs				
	glyphosate (Roundup Pro, others)	Various	See label	Glyphosate applications will control all desirable turf contacted, so caution should be used. Bare areas created by this application will need to re-seeded to prevent future infestations.

Dallisgrass Control Options in Warm-Season Turfgrass

Repeat applications of MSMA or MSMA + Sencor have long been the standards for dallisgrass control in most warm-season turfgrasses. The potential loss of MSMA as a commercial herbicide would make dallisgrass control increasingly difficult.

Option #1- MSMA Programs

Apply MSMA at 2 lb ai/acre every seven to 10 days. Be aware that no more than four applications can be made in a season, as most labels restrict the amount of active ingredient applied to 8 lb ai/acre per year (Table 1). This program will likely need to be repeated for a second year to provide adequate control. Be aware that in most cases, MSMA formulations that include a surfactant provide better control than those that do not.

On mature bermudagrass stands, MSMA can be applied with Sencor. Make three applications of MSMA at 2 lb ai/acre + Sencor at 0.5 lb ai/acre on a 10- to 14-day interval. Applying Sencor at intervals less than 10 days could potentially injure bermudagrass.

Option #2- Sulfonylurea Programs

Many of the newer sulfonylurea herbicides have activity against dallisgrass; however, results vary and might not be at a level deemed commercially acceptable. Multiple applications of Revolver, Certainty and Monument all have activity against dallisgrass. Better results have been achieved when sulfonylurea herbicides have been applied as spot treatments rather than broadcast sprays. Research has also reported that applications of these herbicides are more effective when applied to dallisgrass plants that have previously received an application of MSMA.

Option #3- Glyphosate Programs

Bermudagrass will go dormant before dallisgrass each winter. Apply glyphosate at 1.5 lb ai/acre after bermudagrass is totally dormant and dallisgrass leaves still exhibit some degree of green color. Timing is critical, as there is usually only about a two-week window available to safely make this treatment. Use caution when making a glyphosate application to dormant bermudagrass, due to the potential for injury. A follow-up application of MSMA or MSMA + Sencor the following spring will improve control.

Dallisgrass Control Options in Tall Fescue

Limited options are available for controlling dallisgrass in tall fescue. Be aware that if successful, there will be numerous voids (bare areas) in the turf canopy after dallisgrass has been removed. These voids will be susceptible to future weed infestations. Bare areas should be re-seeded with a high-quality cultivar of tall fescue. For more information on selecting a high-quality tall fescue cultivar, please refer to the University of Tennessee Extension publication W159-E (Turfgrass Selection – Fescues).

Option #1- MSMA Programs

Sequential applications of MSMA at 1 lb ai/acre, on a 14-day interval, can be used to control dallisgrass in tall fescue. Note that the labeled use rate of 1 lb ai/acre on tall fescue is lower than that for bermudagrass, which consequently will reduce control. Use caution when applying MSMA to tall fescue because of the potential for injury. Do not apply MSMA if tall fescue is under drought or heat stress, as the injury may be severe.

Option #2- Fusilade II Programs

Make two applications of Fusilade II at 0.09 lb ai/acre or Fusilade II at 0.09 lb ai/acre + Tenacity at 0.25 lb ai/acre at 3-4 week intervals for dallisgrass control. Make the initial application when dallisgrass is breaking dormancy. Do not apply Fusilade II if tall fescue is under stress due to the increased potential for injury.

Option #3- Glyphosate Spot Treatment Programs

Spot treatments of glyphosate can be used to control dallisgrass in tall fescue. Precise applications are required, as glyphosate, a non-selective herbicide, will kill any desirable turf that it contacts in addition to dallisgrass. Bare areas will need to be reseeded to prevent future weed infestations and improve the overall aesthetic quality of the turfgrass stand. Refer to the University of Tennessee Extension publication W159-E (Turfgrass Selection – Fescues), for more information on selecting a high-quality tall fescue cultivar.

Final Thoughts

Controlling dallisgrass in warm- and cool-season turf is difficult. The most effective programs involve applications of MSMA and sulfonyleurea herbicides. In some cases, dallisgrass pressure may be so high that the best control option is renovation. For more information on turfgrass renovation, please refer to the University of Tennessee turfgrass extension Web site, <http://tennesseeturf.utk.edu>

Always refer to the product label for specific information on proper product use, tank-mix compatibility and turfgrass tolerance. For more information on turfgrass weed control, visit the University of Tennessee's turfgrass weed science Web site, <http://tennesseeturfgrassweeds.org>

Disclaimer

This publication contains herbicide recommendations that are subject to change at any time. The recommendations in this publication are provided only as a guide. It is always the herbicide applicator's responsibility, by law, to read and follow all current label directions for the specific herbicide being used. The label always takes precedence over the recommendations found in this publication.

Use of trade or brand names in this publication is for clarity and information; it does not imply approval of the product to the exclusion of others that may be of similar, suitable composition, nor does it guarantee or warrant the standard of the product. The author(s), the University of Tennessee Institute of Agriculture and University of Tennessee Extension assume no liability resulting from the use of these recommendations.

Visit the UT Extension Web site at
<http://www.utextension.utk.edu/>

SP 642-2/09 09-0183