

TURFGRASS SCIENCE

at the University of Tennessee

Removing Overseeded Perennial Ryegrass from Bermudagrass Turf

Greg Breeden, Extension Assistant, Turfgrass Weed Science
James T. Brosnan, Assistant Professor, Turfgrass Weed Science
Thomas J. Samples, Professor, Turfgrass Science and Management
 Department of Plant Sciences

Introduction

Bermudagrass (*Cynodon* spp.) stands are often overseeded with perennial ryegrass (*Lolium perenne*) in Tennessee. As bermudagrass growth slows each fall with the onset of cooler temperatures, plants turn brown and eventually enter winter dormancy. These dormant stands are often overseeded with cool-season turfgrasses, like perennial ryegrass, to provide green color and improved aesthetic quality throughout the winter months. On athletic fields, overseeded perennial ryegrass offers improved playing conditions compared to dormant bermudagrass. Despite these advantages, problems can arise if the overseeded turf is not chemically removed the following spring.

Bermudagrass Growth Cycle in Tennessee

Bermudagrass is one of the most commonly used turf species in Tennessee. This species grows rapidly throughout the summer months, allowing it to quickly recuperate from the stresses of foot traffic common in high-traffic areas like athletic fields. However, as temperatures cool each fall, growth slows and the turf canopy eventually turns brown as the plant enters winter dormancy (Photo 1).

Overseeding Practices in Tennessee

As a result, bermudagrasses are often overseeded in September or October with a cool-season turfgrass, like perennial ryegrass, to provide improved aesthetic and functional quality throughout the winter months (Photo 2). Historically, older cultivars of perennial ryegrass could not withstand summer temperatures in Tennessee and would naturally be eradicated during early summer as temperatures increased. However, perennial ryegrass breeding efforts have led to the development of heat-tolerant cultivars that can perpetuate during the Tennessee summer heat. This is problematic, as research has shown that bermudagrass needs approximately 100 days of growth without perennial ryegrass competition to provide maximum performance during the summer. Growth of overseeded turfs will not be significant; most of these perennial ryegrasses will persist in a dormant state during the summer as dense clumps that are not only unsightly, but also are a potential safety hazard on athletic fields (Photo 3). In these instances, the persisting perennial ryegrass is commonly referred to as a weed termed “clumpy ryegrass.”



Photo 1. Dormant bermudagrass turf



Photo 2. Athletic field overseeded with perennial ryegrass



Photo 3. Clumpy ryegrass infesting bermudagrass

Why Should a Transitioning Herbicide Be Used?

Clumpy ryegrass is more difficult to control than overseeded perennial ryegrass. While the reason for this difference is not completely understood, it is believed that plants undergo physiological processes when acclimating to increased summer temperatures that consequently render them less susceptible to herbicides used for control.

A well-timed herbicide application in early spring should provide nearly 100 percent control of the overseeded perennial ryegrass within 21 days after treatment, while many of the same herbicides will only provide an average of 50-60 percent control of clumpy ryegrass during the same time period (Figure 1).

Applying a Transitioning Herbicide

Turf managers who decide to overseed in the fall should be committed to chemically removing the overseeded perennial ryegrass in spring with a transitioning herbicide. In Tennessee, these transition aids should be applied sometime beginning in mid-April through mid-May. Numerous herbicides are labeled to chemically remove overseeded perennial ryegrass from bermudagrass turf (Table 1). The speed of transition should be considered when choosing a herbicide. Kerb and Manor (formerly marketed as Blade) are older products that tend to work slower than some of the newer sulfonylurea herbicides, like Monument. A slower response does not mean that these herbicides are less effective. In general, warmer temperatures usually increase the speed of transitioning. Applications at soil temperatures lower than 50 degrees F are not recommended, due to potential reductions in efficacy.

Make sure to take extra precautions if applying transitioning herbicides on slopes or areas adjacent to sensitive cool-season turfgrasses, like creeping bentgrass (*Agrostis stolonifera*). Herbicides used to chemically remove perennial ryegrass have been shown to move off-site with not only surface water, but with foot and equipment traffic as well. Maintaining buffer zones between treated and sensitive areas and removing dew with irrigation (<1/8 inch) the morning after application will help to prevent problems.

Final Thoughts

Overseeding dormant bermudagrass with perennial ryegrass will improve turf color and quality during the winter months; however, overseeded perennial ryegrass must be removed with a transitioning herbicide in late spring to mitigate the problems associated with clumpy ryegrass infestations.

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>

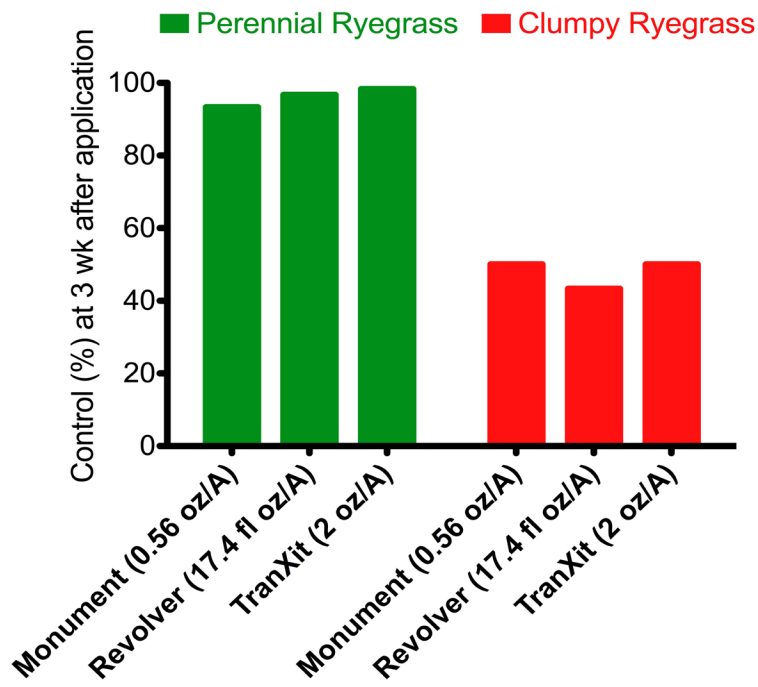


Figure 1. Control of overseeded perennial and clumpy ryegrass with various transition aids three weeks after application

Table 1. Transitioning herbicides labeled to chemically remove overseeded cool-season turfgrasses from bermudagrass.

Herbicide	Formulations	Active Ingredient	Rate/A	Comments
Certainty	75WDG	sulfosulfuron	1.25-2 oz.	Repeat applications may be necessary for complete control. Make sequential application when daily temperatures exceed 80 F. If single application is preferred, apply at the 2 oz rate.
Katana	25WG	flazasulfuron	0.5-3 oz.	Apply at 50 percent bermudagrass green-up for optimal maintenance of a green turf situation.
Kerb	50WP	pronamide	1-2 lb.	Very slow, but effective. Highly mobile. Can slow bermudagrass green-up in spring.
Manor	60WDG	metsulfuron	0.125-0.5 oz.	Repeat applications are often required for complete control
Monument	75WG	trifloxysulfuron-sodium	0.1-0.53 oz.	The lower rate allows for a more gradual transition. Higher-labeled rates and warmer temperatures will result in faster removal.
Revolver	0.19SC	foramsulfuron	8.8-26.2 fl. oz.	Repeat applications (4- to 6-week interval) may be necessary for complete control. Higher labeled rates and warmer temperatures will result in faster removal.
Tranxit	25DF	rimsulfuron	0.5-2 oz.	Should not be applied in areas where children can contact turf. Repeat applications may be necessary for complete control.