

# Timing Is Everything With Spring Transition

Here are some tips from research and practical findings to aid superintendents with overseeding

By John Willis and Shawn Askew

**W**hether you like it or not, overseeding bermudagrass is a necessity for some golf course superintendents and athletic field managers. Clientele using the overseeded playing surface see the result of much time and effort through early spring and summer without fully realizing the agronomic and financial sacrifice associated with the practice of overseeding. Most often, establishing the overseeded grass is the easy part. But failure to remove overseeded perennial ryegrass weakens bermudagrass extensively and disrupts uniformity and playability of fairways and athletic fields.

Spring transition is very important for bermudagrass health, and most often herbicides are used to selectively control the overseeded grass. This article highlights various research and practical findings that can aid turf managers dealing with the issues of spring transition.

Sometimes, spring transition and bermudagrass growth can be mediocre as it was for most superintendents in the upper transition zone during the spring of 2008. But with few cold snaps, gradually warming temperatures allowed bermudagrass to grow well. It was far from a worst-case scenario for the transition zone, considering that in many years nighttime temperatures stay cooler, and at least one and often two cold snaps occur that can bring bermudagrass growth to a screeching halt. All too often these cold snaps occur immediately after an herbicide application to selectively control the overseeded grass.

Athletic field managers who are finished with all spring events don't have as

many worries when spring transition comes around. Their only worry is growing a strong bermudagrass base, so perennial ryegrass can be removed as early as possible to allow bermudagrass to have a long growing season. If no one is going to see it, who cares what it looks like.

But golf course superintendents, who must have an aesthetically pleasing spring transition, are in a different boat. Controlling the overseeded grass too early can lead to as many as four weeks of ugly, thin bermudagrass in their situations if a cool, wet period occurs after the transition aid is applied.

There's another reason to wait for warm periods to selectively control perennial ryegrass. Research at Virginia Tech has found that some herbicides' effectiveness toward perennial ryegrass is greatly reduced by cool

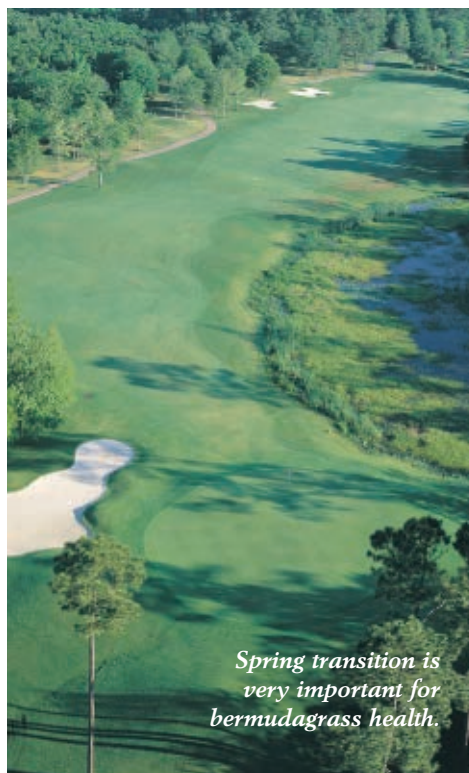
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JOHN DEERE

## QUICK TIP

After a long day on the course, be sure to give your utility vehicle a thorough cleaning to maximize component life. Unless your vehicle is equipped with sealed bearings, follow the greasing recommendations per the operator manual to purge water and contaminants from the bearings. Maintain proper tire pressure to optimize machine footprint and enhance tire life. For more information on utility vehicle maintenance, contact your local John Deere Golf sales representative or visit [www.johndeere.com](http://www.johndeere.com)



*Spring transition is very important for bermudagrass health.*

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soil temperatures. This research shows that foramsulfuron (Revolver), flazasulfuron (to be marketed) and trifloxysulfuron (Monument) were all slower acting in cooler temperatures. With regard to long-term control, foramsulfuron at 17 fluid ounces an acre controlled only 30 percent of perennial ryegrass when the soil temperature at 3 inches was below 65 degrees Fahrenheit, compared to 80 percent control when soil temperature was above that threshold. Cold temperatures affected trifloxysulfuron and flazasulfuron causing slower action, but overall no long-term reductions in perennial ryegrass control.

Transition aids should be applied at a timing based on long-term forecast with favorable conditions for bermudagrass growth. Time and again, we've found that factors increasing bermudagrasses' competitive ability improve spring transition. Once you see a significant amount (greater than 40 percent) of bermudagrass start greening up, help it along with increased nitrogen fertility, lower mowing height and judicious use of water before using a transition aid. More aggressive cultivars for a given area consistently yield a more acceptable transition.

Cultivars more prone to spring dead spot and winterkill show their weakness during spring transition, so updating your bermudagrass by renovating, interseeding or intersprigging might be something to consider. Mike Goatley, Ph.D., turfgrass extension specialist for Virginia Tech, said cultivars which tolerate spring dead spot and overcome winter injury through aggressive growth habit often do better in Virginia.

"Riviera and Patriot are two cultivars we've had the most success with in terms of aggressive growth habit and overcoming cold weather issues," Goatley says.

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***Nine weeks after application, perennial ryegrass control (in absence of bermudagrass) is influenced by low soil temperatures.***

***When applied at soil temperatures below 65 degrees F (A) foramsulfuron activity is reduced more than trifloxysulfuron (B) and flazasulfuron (C).***



*(Top) Sponge application controls perennial ryegrass in small dots. (Bottom) Strip-killing perennial ryegrass reduces aesthetics when viewed down the strips, but turf color and quality are still acceptable when viewed across strip. Both methods allow for play and acceptable quality during transition.*



**QUICK TIP**

Maintaining healthy turf is one of the most important components in pest management. Healthy turf can grow through pest invasion and infestation, fighting off attacks. Compromised, nutrient-deficient turf may need the added protection of pesticide to kill the offending pests, but having a proactive nutrition plan in place will ensure that turf is properly equipped to handle the stress of infestation and recovery from pest attacks. Ready your turf against attacks by giving it the strength needed to withstand attack and the corresponding stress. Read more at [www.floratine.com](http://www.floratine.com).

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Riviera and Patriot have become very popular on golf courses and athletic fields in Virginia. Keep in mind that every fairway and even certain areas within a fairway may need individual attention. For instance, north-facing slopes, shady areas and low-lying areas can be three or more weeks behind hilltops and south-facing slopes in terms of bermudagrass green-up and development.

Virginia Tech researchers have developed a novel approach to spring transitioning that involves partially controlling perennial ryegrass prior to applying a blanket application of a transition-aid herbicide. Partially controlling perennial ryegrass gives bermudagrass the competitive edge in the small places that are controlled prior to the blanket application. Therefore, more bermudagrass

should be in place when a blanket application is applied. More bermudagrass cover will improve quality and color that's sacrificed by the traditional blanket transition method.

Three partial-control techniques have been tested: drip kill, sponge kill and strip kill. Between 20 percent and 30 percent of perennial ryegrass was killed using these techniques prior to the blanket application.

Partial-control techniques preserve aesthetics based on the fact that turfgrass in front and behind a small opening in the canopy will mask the appearance of that opening. The turf looks uniform when viewed from a distance of about 30 feet. The strip-kill method was the only partial control technique that resulted in a significant reduction in quality prior to the blanket application and then only when viewed with the line of the stripes. When viewed overhead, the drip-kill and sponge-kill methods look more like a natural phenomenon and less distinct. All methods of partial control resulted in significantly more bermudagrass cover after the blanket application was made.

One month after the transition, plots using partial-control techniques had 80 percent to 90 percent bermudagrass cover compared with 68 percent cover in plots using blanket treatment only. While partial-control techniques are an effective way to improve aesthetics during spring transition; further research is warranted to refine application equipment, timings, and percent of partial control needed for best results.

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