

## Kill The Rye Or The Bermuda Will Die

By Brian Whitlark, agronomist, West Region

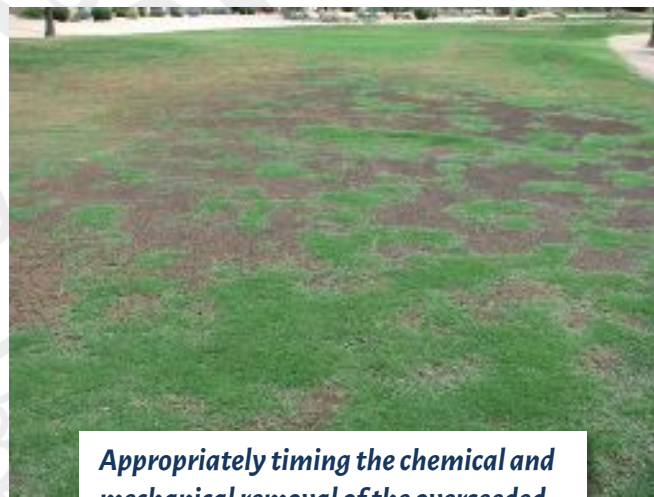
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It is well documented that overseeding with perennial ryegrass year after year will reduce bermudagrass growth and recovery in the spring ([Spring Transition: Going, Going, Gone](#)). In the last ten years, turf managers in the Southwest Region have changed their practices to proactively manage the transition from overseeded ryegrass to bermudagrass, often by a combination of mechanical and chemical means. The question I often hear as summer approaches is *when* should such practices begin?

It is important to recognize that bermudagrass green-up and active growth begin under different conditions. Green-up typically begins when soil temperatures at the four-inch depth reach 55 degrees F. However, active growth of the bermudagrass is said to occur under the following conditions:

- When soil temperatures at the four-inch depth reach 65 degrees F.
- When the minimum air temperature exceeds 65 degrees for seven consecutive nights.

Nevertheless, if you review when these conditions have occurred over the last 11 years (2000 – 2010), in Phoenix, AZ, it appears they may be too early in the season to accurately predict when active bermudagrass growth begins. Consider



*Appropriately timing the chemical and mechanical removal of the overseeded ryegrass is important to effectively kill the ryegrass and encourage bermudagrass growth and recovery.*

that the average date when the soil temperatures reach 65 degrees is March 21<sup>st</sup> (data gathered from the [Phoenix Encanto AZMET weather station](#), and the minimum air temperatures do not reach the 65 degrees, seven-day average until May 15<sup>th</sup>. Recent research on chemical removal of ryegrass, and the ensuing bermudagrass recovery, indicates that ([Perennial Ryegrass Transition Using Selected Herbicides, Comparison of Rates and Timing of Applications of Transition-aide Herbicides](#)) spraying to kill the ryegrass in May often does not effectively remove the ryegrass, and the period between ryegrass decline and bermudagrass recovery is extended.

In an overseeded condition, consider a different indicator to aid the timing of ryegrass removal. Active bermudagrass growth may be better predicted by using heat units (HU). Using the 85/55 threshold model (at Phoenix Encanto), the average date over the last ten years that 1,900 HU were accumulated for the calendar year is June 11<sup>th</sup>. That date has ranged from as early as June 4<sup>th</sup> in 2009 to as late as June 20<sup>th</sup> in 2010. Bermudagrass growth and recovery last year was very slow in June, which coincides well with the 1,900 HU indicator.

Lastly, the goal is to achieve 100 days of bermudagrass growth without competition from the ryegrass. If overseeding October 10<sup>th</sup> this year, then the ryegrass should be completely gone by July 1<sup>st</sup>, or thereabouts. Given that removing the ryegrass by using mechanical and chemical means will require about two weeks, time the chemical application when the cumulative HU reaches 1,900 nearest your golf course location for the calendar year.

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