

Speeding Transition Of Overseeded Perennial Ryegrass

As the range of hybrid bermudagrasses expands and improved seeded bermudas gain acceptance, winter overseeding and spring transition are more important issues. During the winter, dormant bermudagrass is camouflaged and protected by overseeded ryegrass. But, when it's time for the bermuda to come back to life, lingering perennial ryegrass can be a problem.

To find out the approved ways to discourage ryegrass and encourage bermuda in the spring, *TurfGrass Trends* contacted two respected experts at Auburn University, Drs. Coleman Ward and Jeffrey Higgins.

Begin in the Fall

Successful spring transition starts with good bermudagrass management in the fall. Make sure your bermuda goes into the winter with healthy rhizomes and stolons. Several practices will insure that this happens.

Potassium — Apply potassium liberally, especially during the fall. Apply a fertilizer, such as a 10-5-20, 0-20-20, or 16-0-38, at a rate to supply 0.75 to 1.00 lb. of K_2O per 1,000 sq. ft. monthly from September through November.

Avoid scalping — Avoid scalping in the fall. When bermudagrass recovers from scalping, it consumes stored carbohydrates which are needed for spring regrowth. Mow low without scalping prior to overseeding.

Delay overseeding — Delay overseeding until the bermudagrass becomes less competitive. Observe the amount of clippings taken each mowing as fall progresses. When it decreases, overseed. By delaying the date of overseeding, less vertical mowing and aggressive preparation (penalty mowing) of the bermudagrass will be required to reduce its competitiveness with the germinating perennial ryegrass. Less scalping and vertical mowing means stronger bermudagrass.

Maintain irrigation — Do not let the rootzone dry out. Fall can be the driest season of the year despite cooler temperatures.

Apply fungicides — Apply systemic fungicides to the bermudagrass in September to prevent spring dead spot.

Cultural Practices

For many years, turf managers and researchers have sought a foolproof scheme to insure a smooth spring transition. There are several cultural practices recommended to remove the overseeded turfgrass while speeding recovery of the bermudagrass.

Delay core aerification — This idea is opposite to popular thought. The theory behind early core aerification is to stimulate the bermudagrass with warm air entering the soil through the aerification holes. In fact, cold air, which is heavier than warm air, is more likely to settle in the core holes. It is best to delay aerification until bermudagrass is actively growing so closure of the holes can occur as rapidly as possible.

Closer mowing — Close mowing of the perennial ryegrass should weaken the perennial ryegrass because it is a bunch grass. Almost all of the ryegrass' stored carbohydrates are above ground and will be removed by close mowing. However, for this practice to be effective, it must begin *and end* before the bermudagrass initiates spring growth. Removing any new leaves from the bermudagrass is extremely detrimental to its recovery from dormancy. Carbohydrate reserves in the bermudagrass' rhizomes and stolons are drastically depleted by the initiation of new growth. So, mow the ryegrass lower early in the spring and raise the cutting height as soon as you notice new bermuda growth.

Vertical mowing — Vertical mowing thins out perennial ryegrass and permits more light penetration to the bermudagrass. However, as described in relation to closer

mowing, it is harmful to the bermudagrass once it starts growing again. Vertical mowing is more likely to be beneficial where perennial ryegrass was seeded at excessively high rates (more than 400 lbs. per acre). This practice could be more detrimental than beneficial when the bermudagrass has begun to grow.

Withholding irrigation — Since perennial ryegrass requires more water than bermudagrass, withholding irrigation

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should reduce its competitiveness and enhance the transition to bermudagrass. In practice, this theory has at least two flaws. First, spring is often the highest rainfall period of the year.

And second, the turf area may be in use and irrigation might be needed to keep it playable.

Increase nitrogen fertilization —

Applying high rates of nitrogen (more than 1.25 lbs. per 1,000 sq. ft. per month) causes an increase in the top growth of both perennial ryegrass and bermudagrass. However, increased nitrogen is more detrimental to the root growth of perennial ryegrass than bermudagrass.

Furthermore, bermudagrass responds favorably to much higher levels of nitrogen than does ryegrass. Increasing nitrogen is the one sure way, among the cultural practices listed, to favor bermudagrass during transition. This is especially true as night time temperatures exceed 62°F. The downside to this approach is late season frosts can damage the bermudagrass after it has been fertilized.

Making a Herbicide-Assisted Transition

Cultural practices alone are often a very uncertain way to remove perennial ryegrass and reduce its competition with the base bermudagrass. The use of selective postemergence-applied herbicides can compliment cultural practices to provide consis-

tent spring transition. But before using a herbicide to remove perennial ryegrass and speed transition, turf managers should:

- Be sure base bermudagrass is alive.
- Check the activities calendar for events during the spring season.
- Consult long-range weather forecasts. You might need to hold the perennial ryegrass if cool, wet weather is forecast.
- Discuss spring transition options with users of the site to prevent surprises.

If an instant spring transition is desired and acceptable, then metribuzin (Sencor 75DF) can be applied in the spring at 0.67 lb. of product per acre. This will control the perennial ryegrass and allow the bermudagrass to grow. However, severe turf discoloration will result for a couple of weeks due to the removal of the ryegrass.

Napronamide (Kerb 50WP) can also be used to remove overseeded perennial ryegrass. Kerb should be applied at two pounds of product per acre in the spring. This treatment will not work as fast as Sencor. The addition of a nonionic surfactant at 0.25% volume to volume is recommended.

Seed Selection

Ward and Higgins believe that perennial ryegrass is the best choice for winter overseeding high-use turf. While other cool-season turfgrasses can be used, they believe perennial ryegrass has superior wear tolerance, establishes quickly, has excellent frost tolerance, requires less mowing than some varieties and the advanced cultivars provide better disease resistance. They report that more than 50 blends and cultivars of perennial ryegrass are currently available.

Some cultivars of perennial ryegrass, however, have demonstrated extraordinary heat and drought tolerance, which enables them to tolerate many of the cultural practices described. Avoid these ryegrasses when purchasing seed in the fall.

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