Maintain Balance With PGRs

Keep your annual bluegrass-to-bentgrass ratios reasonable in your greens

BY TOM WATSCHKE

From the mid-Atlantic to much of the Northeast and upper Midwest, the most common distribution of turf species for putting greens is a mixture of creeping bentgrasses and various annual bluegrass ecotypes.

Over the years, these two species battle, with ebbs and flows, until the ratio stabilizes at a manageable level. Despite that stability, however, seasonal fluctuations in the ratio of these two species occur every growing season.

Early in the season, the annual bluegrass ecotypes are more aggressive, while during the summer months the balance of power shifts to the bentgrasses. During the fall of the year, the struggle shifts back to the annual bluegrasses.

The availability of plant growth regulators (PGRs) and the use of other cultural tactics can provide a means of manipulating these ratios. Opportunities now exist which enable superintendents to take advantage of these seasonal shifts to provide a competitive advantage for one of the species or the other. For example, if an increase in bentgrass population is desired during a growing season, the following scenario can provide an advantage for that species:

Keep available nitrogen to a minimum early in the season. Wait until the soil temperature warms to the upper 40s before pushing bentgrass growth, as most bentgrass cultivars do not begin aggressive growth until after the soil warms.

Allow the annual bluegrasses to flower and seed. This process causes the plant to expend considerable carbohydrate for seed production. Once the seedhead is produced and shatters, the remaining tiller is in a physiologically weakened state.

Apply a gibberelin-inhibiting PGR as soon as possible after seeds shatter. Make sure the PGR application is supplemented with an increment of available nitrogen (at least .3 pound per thousand square feet).

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This PGR application will keep the annual bluegrass in a weakened condition. At the same time, the creeping bentgrass will have reduced vertical growth, but increased stolon growth.

As a result, the creeping bentgrass, which is beginning a seasonal competitive advantage thanks to environmental conditions, will have its advantage enhanced by the PGR application.

Therefore, a more significant shift toward creeping bentgrass will occur during the summer months. It's also important to maintain nitrogen availability during these months to keep the bentgrass aggressive but not too lush. Spoon feeding and foliar nitrogen fertility tactics can be employed to accomplish the desired result.

Make another PGR application in mid-September, again at label rate (the same application that was applied in the spring). This application will significantly suppress the growth of any annual bluegrass seedlings that have germinated, while keeping the specie's composition from shifting back towards annual bluegrass.

After Oct. 1, depending on particular location, keep the availability of nitrogen to a minimum. The growth of creeping bentgrass slows considerably as the soil cools, days shorten and frosts occur.

On the other hand, the growth of annual bluegrass is stimulated by these conditions. Obviously, there are other cultural practices that can be used to favor creeping bentgrass during the year, and they should also be part of the strategy.

However, the use of PGRs and the precise timing of their application can provide a significant edge as you take advantage of nature's influence on the dynamics of the mixed-species composition that exists on many putting greens.

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