

Green Section Record

REGIONAL UPDATE

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Turf thinning from shade can quickly lead to turf loss during the peak golf season. Fortunately, steps can be taken to offset shade-related challenges.

LET THERE BE LIGHT

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Low sunlight intensity caused by prolonged cloud cover, shade from trees and short days stresses putting greens by reducing photosynthetic activity and efficiency. Ironically, turf leaf growth increases as a result of shade stress as plants attempt to capture more sunlight. This response is influenced by the gibberellic acid physiological pathway in turf, which causes increased or decreased leaf and internode length. Indicators of increased shade or decreased photosynthesis include shallow roots, thinner turf and problems with wear tolerance. Shade stress over the course of a year, or even just a few days, increases turf susceptibility to disease and traffic stress. Fortunately, the following approaches can combat the ill effects of limited sunlight without negatively impacting playing quality:

Increase height of cut

Increasing the height of cut on putting greens, even slightly, improves photosynthesis by increasing leaf surface area. Surface management practices such as light and frequent sand topdressing applications, brushing and grooming help maintain putting green speeds and quality at a slightly higher height of cut. However, when turf is growing slowly it is important to avoid overly aggressive practices.

Plant growth regulators

Production of the plant hormone gibberellic acid (GA) increases under shady conditions, causing internode length to increase. Slightly increasing the application rate of GA inhibitors, such as trinexapac-ethyl, will slow GA production and produce a more favorable putting surface.



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Apply less fertilizer

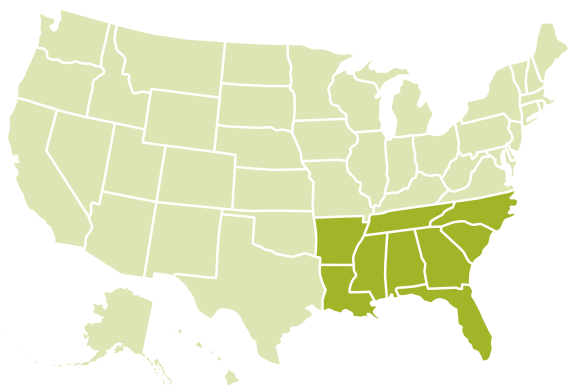
Light-deprived putting greens grow slowly, and applying too much nitrogen fertilizer will cause rapid consumption of carbohydrates, ultimately weakening the turf. Spoon feeding shaded turf with low rates of liquid fertilizer formulations is recommended.

Avoid complicated tank mixtures

When turf is stressed, it is best to keep things simple. Applications containing numerous products can have unintended outcomes. Furthermore, it is difficult to ascertain product performance when using several products at a time. As a general rule of thumb, keep the number of products in tank mixes to a minimum and know how each product performs.

Hormones and biostimulants

Many plant hormones, and some plant-based products such as seaweed or kelp extracts that also contain hormones, can be applied to turf. Adding certain bacteria to products can also produce hormones. Look closely at the ingredients listed in products, especially fertilizers. If a product contains hormones or biostimulants, do some additional research to assess its potential effects. Applying a product with GA doesn't make much sense when natural GA production is already too high. Unfortunately, many fertilizer products have hormones and biostimulants in them without specific documentation. When in doubt, ask your supplier.



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