

Summertime Stress on Bermudagrass



Typical putting green appearance due to summer stress conditions. Photo by Todd Lowe.

Even though bermudagrass is a warm-season species, it can also experience environmental stress during the summer. Bermudagrass is sensitive to reduced light and requires at least eight hours of full-sun each day. Factors that decrease sunlight penetration like trees and clouds are stressful to bermudagrass and decrease food reserves (photosynthates). Closely-mown surfaces like putting greens become more easily stressed as less chlorophyll is available to intercept the sunlight.

Periods of cloudy, rainy weather produce chlorotic bermudagrass putting greens when lower mowing heights are maintained without regard to reduced sunlight and photosynthetic activity by the turfgrass. Chlorophyll is sunlight-dependent and initial signs of stress include loss of color and eventual yellowing and thinning. Aerification holes and low-set plugs often remain greener than the surrounding putting surface simply because of the increased leaf tissue in these areas.

Nature is trying to tell us something.

Raising mowing heights during this time compensates for reduced amounts of sunlight and is the best means to improve putting green quality. Even slight increases in mowing height significantly improve chlorophyll production. This past summer

was especially cloudy and courses that weathered best were those that gradually raised mowing heights throughout the summer as daily afternoon showers began to occur. Courses that maintained low mowing heights experienced more stress as was evident in yellowish, thin putting surfaces.

It is important to limit other stresses during this time until the putting surfaces have improved. Avoid aggressive cultural practices (low mowing, core aeration, verticutting) during periods of stress as they further weaken putting surfaces and prolong recovery. Instead, light topdressing, weekly spiking and frequent foliar fertilization should be applied to aid turf quality. Also, secondary pathogens may take advantage of the weakened state of the putting surfaces, so keep a watchful eye and treat as necessary.

Previous research with zoysiagrass has shown the plant growth regulator trinexapac-ethyl (Primo) to be useful in shady situations. However, little is known about its effect on bermudagrass in reduced light. Research at Clemson University is evaluating Primo on shaded TifEagle putting surfaces and preliminary results are promising.

Todd Lowe

WINTER PINES GC

Fourth of July Color is 'Pea Green' on Push-up Greens

The stress on the Tifdwarf bermudagrass greens we have been seeing the past few years at Winter Pines has been on the greens that were the push-up style construction built without drainage back in 1968. They are still relatively free from any mutations or off-types, but certain dwarf strains start to turn a pea green around the 4th of July each year. Then they turn yellowish green and eventually, a straw color and die if not treated.

No amount of fertilizer, aerification or other cultural practices seems to be able to stop it. Areas on the greens that we cut out and resodded don't seem to be affected again.

These past few years we have sprayed the problem greens with Heritage at the .4 lb rate to try to prevent the onset of the problem, and it seems to be working. We have also used Heritage as a curative treatment and that also worked very well. One application each summer seems to do the trick. Spot spraying with a 3-gallon sprayer is used to retreat persistent areas.

The control program that has worked best for us is triggered by observing the greens. When they go off color and don't respond to normal fertilizer and water then we make our fungicide applications. So far none of the new bermudagrass greens we have rebuilt and replanted seem to be affected.

Joe Ondo, CGCS

JOHNS ISLAND WEST GC

Follow the Basics, And Pay Attention to Weather, N:K Ratio

Our greens were converted from Tifdwarf to TifEagle during the summer of 1999. Since then it has been a learning experience. I have nothing but good things to say about TifEagle; sure there have been some troubling moments, but with Nature dealing the cards, you can't always win.

We experienced a severe breakout of

UNWELCOME GUESTS SUPER TIPS, PAGE 40

