Summertime Stress on Bermudagrass

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. Aeration 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.

Typical putting green appearance due to summer stress conditions. Photo by 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, aeration 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; surely 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
The lower heights and Primo use have enabled us to keep a very dense stand of grass. The only thin areas we have are in very shady spots, and of course, algae can invade. These areas are spiked as frequently as possible and chemically treated as needed. When the conditions improve, drop them again. It’s been our opinion that the grass seems to thrive better the lower we keep it again depending on the weather.

Our mowing practices vary throughout the year from the lowest setting of .105 to about .140 being the highest setting. We typically will keep heights up a bit during the summer, usually around .125. If it looks like we’re going to have a few of those cloudy, nasty days we will bump the mowers up a little and then, as conditions improve, drop them again. It’s been our opinion that the grass seems to thrive better the lower we keep it, again depending on the weather.

With the use of Primo we have managed to keep very acceptable green speeds during the summer without having to drastically lower mowing heights. The lower heights and Primo use have enabled us to keep a very dense stand of grass. The only thin areas we typically develop are in very shady spots, and of course, algae can invade. These areas are spiked as frequently as possible and chemically treated as needed.

TifEagle is a relatively high-thatch produc-