## Turf M.D.

## THE DOCTOR IS IN THE HOUSE

urf maintenance in most of the United States this past year was extremely difficult and challenging. Starting with the snow (and ice) melt in late winter and early spring and continuing through the hot, humid, wet/dry summer, turf loss became a way of life for many golf course superintendents.

The last thing I want to do is relive this past year (which may not be over yet). In fact, I wish I could take some time off to regroup and think about next season during the winter. But while a vacation may sound good, now is the time to look to the future.

What better time, while things are still fresh in our minds, to document improvements that need to be made to minimize turf loss and personal stress in the future. Turf loss can be a sign of where improvements need to be made. Here are some key indicators that need to be documented and, if budgets allow, corrected:

■ Drainage — Starting with this past winter, several Northern golf courses suffered winter injury from continual ice cover and through freeze/thaw cycles. A major component of winter injury is water. Removing or reducing the potential for water freezing on the turf reduces the potential risk of winter injury.

These same areas where water accumulates or saturated soils exist are high-risk areas for pythium blight during the summer. Installing drainage reduces the likelihood of one or both of these problems. Although many courses experienced pythium blight along drainage lines, at least superintendents know where to target or spot treat in the future.

■ Air movement — North Carolina State Turfgrass Professor Lane Treadway made this comment in July on a turf disease blog, "No Wind = No Grass." The lack of air movement increases canopy temperatures and decreases evapotranspiration, which spells death during hot, humid conditions. This is the time to mark out the trees that need to be removed from around greens, tees and

## It'd Be Nice to Take a Rest, But ...

BY KARL DANNEBERGER



... NOW IS THE
TIME TO ADDRESS
TURF PROBLEMS
THAT SO MANY
SUPERINTENDENTS
EXPERIENCED OVER
THE PAST YEAR

fairways to improve air movement. If tree removal is not an option, consider removing underbrush from wooded areas that may surround the green to promote some air movement or installing fans around greens that are especially stagnant.

Shade also plays a role in winter injury. Remembering or documenting where winter injury occurred can, in many instances, signal trees that need to be removed in the fall.

■ Traffic — Identifying and correcting flow patterns where traffic injury occurred can help reduce turf decline in the summer. Wear injury is often a sign of the severity of summer stress. Around tees and greens, wear injury from golf cars may identify places to build new cart paths.

Entry and exit points from greens that show excessive wear may be a key to changing your crews' work-flow patterns. Cultural practices that enhance wear tolerance or minimize wear injury need to be implemented prior to the start of the summer stress. Changing practices when decline occurs has much less of an impact.

And, finally, there's wear injury because of golfers. This is a nice problem to have from a club operation point of view. But having a couple hundred rounds a day during summer stress periods causes damage agronomically. How we educate golfers on how they can help with this matter by being more aware is a challenge that doesn't start when turf loss begins.

It's just another reason to think about correcting these problems now.

Karl Danneberger, Ph.D., Golfdom's science editor and a turfgrass professor from The Ohio State University, can be reached at danneberger. 1@osu.edu.