Have We Gone Too Far?

The grass is talking to you. Are you listening?

BY STAN ZONTEK

Why are so many golf courses having problems with moss? Why are putting greens slow to heal from pitch marks? Why is the grass on the greens thin and shallow rooted? Why does a pitch shot to a green gouge out a chunk of grass versus leaving more of a bruise or a dent? While golf is not played on color, why are greens off-color and look, well, hungry? Why does *Poa annua* seem to encroach all too fast into new greens? While the answers to most of these questions are complex, there still may be a simple common denominator — specifically, a lack of fertilizer.

As someone who is old enough to remember the "good old days," it is easier for me to compare how golf courses were maintained years ago to how they are maintained today. One fact is clear. Except for the initial grow-in of new greens, golf courses generally are using less fertilizer today than in the past . . . a lot less.

Why do I say this? For a lot of reasons. Putting greens today are having problems with moss, algae, and pitch marks that are slow to heal, etc. It is true that there are many factors contributing to all of these problems, but most center around close mowing, low fertility, and too much water. Some of this water you can control; some you cannot (as witnessed by all the rainfall in the eastern United States this year). Today's emphasis on green speeds doesn't allow much wiggle room with putting green mowing heights. With fertility there is more room for change.

Today, few new golf courses have greens built to something other than sand-based rootzones. Also, essentially every older golf course has modified the top few inches of soil, creating a layer of dirty sand even though the base of the green may be soil with clay.

With today's emphasis on green speed, the simplest way to achieve fast greens is to reduce the mowing height, limit the use of fertilizer, apply growth regulators, topdress, and roll. Unfortunately, in gauging how much to fertilize greens, superintendents sometimes forget the obvious: That is, clipping removal removes nutrients that would otherwise be recycled. What is the bottom line?

- Count the pounds of nitrogen per 1,000 square feet applied to your greens. Subtract 25-60% of that total as the amount removed by removing clippings. You could also use the arbitrary amount of 2 pounds per year as the approximate amount of nitrogen removed by clipping removal. Subtracting either of these numbers should provide you with an estimate of the *effective* amount of nitrogen applied to your greens per 1,000 square feet per year.
- Remember the old textbook ratios of nitrogen, phosphorus, and potassium that suggest 3-1-2 or 4-1-2 or 4-1-4 ratios? How close are you coming? The grass's basic fertility needs seldom change.
- How do your greens look? Do they have a moss problem? Close mowing and a lack of fertility contribute to moss invasion. Higher mowing heights and more fertilizer contribute to moss reduction.
- Do your greens lack color? Although golf is not played on color, a nice green color indicates healthy grass versus the more yellow-green chlorotic-looking grass that needs nitrogen.
- Are your greens slow to recover from traffic, pitch marks, or disease blemishes? This, too, may be a sign that fertility levels are too low, even allowing for the fact that many putting greens are treated with growth regulators.
- Do you have a problem with algae? Maintaining good turf density is an important IPM tool to combat algae.
- Plant health — current research continues to show a link between plant health and less disease.
- Do your greens look hungry? *The grass is talking to you.* Maybe it is time to work more fertilizer into your program.

In summary, our industry always seems to go in cycles. It was not all that many years ago in the middle to northern regions of the country that a basic fertility program on old greens was 1-2 pounds of nitrogen per 1,000 square feet *per month*. We now see golf courses, especially in the North, that fertilize with not a whole lot more fertilizer for an entire season! Obviously, I am not suggesting a return to the days when greens were cut at ¼ inch and fertilized at 12-18 pounds of nitrogen per 1,000 square feet per year (in the North). What I am suggesting is that you look at your grass. Is it talking to you? It probably is. Be a good listener.

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