## Turf M.D.

## THE DOCTOR IS IN THE HOUSE

Ithough discussed for generations, golf course "firmness," specifically on putting greens, has became a buzzword in golf course maintenance circles.

Whereas achieving green speed or ball roll has consumed much of putting green maintenance the last 40 years, the trend is now about green firmness.

I don't intend to minimize the negative impact that excessive ball roll can cause to putting green health, but the recent advancements in equipment technology and the knowledge generated on maintaining high-quality turf help offset this matter. Golf course superintendents who possess the technology and knowledge can achieve desired green speeds on a consistent bases with much less of risk for turf loss than in past years.

Green firmness, however, is the new challenge golf courses face in achieving ideal green quality. How firm a green becomes as measured by the United States Golf Association's TruFirm or a Clegg Impact Hammer is impacted by other factors than just "drying" out a green.

Yes, rootzone moisture is important, but can a green become too dry and lose firmness? I don't know. But an interesting analogy was given to me by someone working with sand bunkers.

If bunker sand is too dry, it becomes soft and fluffy — the opposite of firm. It's not uncommon in this situation to add water to firm up bunkers. Obviously, some problems exist with that analogy, like the impact root systems have on rootzone stabilization, but there's more to firmness than soil moisture. There's no doubt the repetitive nature of maintenance practices like mowing and rolling contribute to surface firmness (researchers are starting to look at this).

Unfortunately, current discussion of golf course firmness at least on the extreme end is that the course has to be brown or on life support. And if your course isn't, then it must be green and lush from overwatering. I find this rather incredulous.

## There's a New Buzzword in Town

BY KARL DANNEBERGER



NUMEROUS FACTORS
TO ACHIEVE THE
DESIRED FIRMNESS
WILL DEPEND ON
MEASUREMENTS
AND QUANTIFICATION
OF FIRMNESS, AND
THEN WHAT THOSE
NUMBERS MEAN TO
A GOLF COURSE

The most common example used for "ideal" firmness condition is links courses, which, by definition and the nature of their habitats, lie on sandy or droughty soils along river estuaries. Under these conditions, gaining firmness is critical to how the course plays. In windy conditions, playing "along the ground" is the essence of links courses, thus playing a firm links course requires large greens and approachable fronts. Unfortunately, the vast majority of golf courses are not links courses.

What I find exciting, challenging and maybe a headache for many is how do you bring the desired firmness to non-link golf courses where part of the character of these courses is parkland in nature? Finding the appropriate level of firmness across a spectrum of climatic conditions, soil conditions, course design and golfer expectation is the challenge.

It will not be as easy as shutting off the water. Numerous factors to achieve the desired firmness will depend on measurements and quantification of firmness, and then what those numbers mean to a golf course. And then determining desired moisture level or range in conjunction with the appropriate cultural practices of mowing, rolling, topdressing, etc., to achieve the level of firmness and smoothness.

The technology advancements, along with the superintendent's knowledge, will be put to the full test.

Who's to say you can't have firm surfaces and green turf, too?

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