

Zeolite magic ingredient for better golf greens

QUESTION: In his article in the May/June issue of *TurfCraft* Jon Scott asked the question: "How long should a United States Green Association (USGA) green last?" What do you think?

Answer: I think Jon's answer to the question was a very good one, and there are some key sentences in his article that bear some repetition and even some expansion.

What we need to remember is that the USGA's recommendations on construction are very much about a system that includes a lot of checks and balances. All too often people will claim to have built to a USGA specification but when you really look at it they haven't. As Jon says: "Sounds very scientific doesn't it? Well it is, and it doesn't take much to mess it up, either."

The USGA growing mix is just that — a mix. It contains sand, peat and soil in very specific ratios, determined in the laboratory — on samples. If the samples don't truly mirror the bulk material used, then disaster can be round the corner. If the mix is not properly mixed, and pockets of raw unblended materials are placed in situ into the green site, it is again a disaster waiting to happen.

It all comes down to housekeeping, and the more carefully it is done the better the result is going to be.

Is peat really necessary? In Australia there is almost no true peat that isn't imported so there is the attractive substitute, cocopeat. Yes, it will give you a quicker build-up of your microbial populations, and, yes, it will eventually start to break down and help to reach that point where, as Jon says: "Once the small pore spaces begin to really outnumber the large it gets harder and harder to make them function as designed."

Is there any other way of doing things? Peat is essential in the water

Ask the expert

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management of greens in the United States and countries with similar climates. Peat protects against the great freezes that occur in mid-winter — and remember freezing causes expansion, which counteracts compaction, but you don't want heave.

In July, I attended the International Turfgrass Society conference in Wales. There were an impressive number of papers that discussed the merits of including zeolite in root zone mixes. The general conclusion was that zeolite added to the ability of the mix to control nutrient retention and release, and also increased the overall moisture retention and porosity balance.

Now zeolite is like peat. If you use the wrong type you won't get a good result. Soft zeolites are just as capable of breaking down and blocking the fine pores as organic matter. Fortunately in Australia we have exceptional zeolite, and only the foolish overlook its benefits in new greens constructions.

Using zeolite in a greens construction is certainly more expensive than using organic additives, but the advantages it gives in creating a natural slow-release nutrient stream in a way similar to a heavy clay, with all the physical advantages of a sand, are too good to pass up.

This is especially so when you look at its longevity. Once in, it is there for ever.

Sure, that is great if you have a new green under construction, but what if you have older greens?

Another key sentence in Jon's arti-

cle is about when things get a bit tricky. He says: "Properly managed, this all can be mitigated, but for how long?"

The whole maintenance of greens changed when Tom Mascaro developed the West Point corer. Gone were the hand forks; in came the new hollow-tine cores. But these have a hidden Achilles' heel.

With constant use, each time they relieve 5% of the green surface, they create a hard pan at the bottom of the hole. Every action has an equal and opposite reaction.

Machines with heave, such as the Verti Drain, can help to prevent this and, with their deeper penetration, the mitigation can be effective.

Zeolite, with its sand-like character, can be used to fill core holes. Even if it is only 5% of the greens surface, over time, with constant use, you can change the character of the greens mix.

◆ Sometimes, with our fixation on keeping the golfer happy, we lose sight of the traditional skills of greens keeping.

The renovation practices of the old links greens keepers, who planned their renovation to lift the greens' surface, take out the excess thatch, spark up the under-soil with compost, and replace the surface, tend to have been much under-used in modern times.

Zeolite makes an excellent additive in such a program. It can lift the result from ordinary to excellent when incorporated at 5% by volume into the old mix.

Jon has some words of wisdom about this situation, too. "What club wants to have a season-long closure more than once every 25 years? Do it all at once and save everyone a second bout of grief," he says.

And if you can't do that then there is a very special place for a spare green or two in the layout. It allows you to work wonders. ■