

# Rieke reveals metal spike, top dressing, greens rolling research

*Dr. Paul Rieke has taught turfgrass soil management at Michigan State University for nearly 30 years and has received*



Dr. Paul Rieke

*numerous honors, including the United States Golf Association Green Section and Golf Course Superintendents Association of America Meritorious Service awards. He has conducted major research projects in the cultivation (aerification) of turfgrasses, topdressing putting greens, fertilization and soil testing, and mulching tree leaves into turf.*

*Golf Course News:* We understand you have been doing research on the effects of mixing native soils and top dressing sand while using the Toro Hydroject aerifier. What have you found?

**Paul Rieke:** Superintendents wondered if mixing sand and soil would effect water movement or create rooting problems. Our data indicates this isn't occurring, as long as the Hydroject is used once every two to three weeks. Using it more often can shorten root lengths. But even those shorter roots are whiter, indicating they are generally stronger than the older brown roots.

We're also seeing a reduction in the number of earthworm casts [soil deposits]. Using the Hydroject every two to three weeks is either killing the worms or causing them to move away. You don't want earthworms on putting greens or tightly cut fairways. But they are a real asset in soils where you have drainage problems.

We've also been injecting phosphorus, potassium and nitrogen deeper into the soil with the Hydroject. It's unclear whether this has any positive effect. It appears the turf doesn't care how deep those materials are injected as long as they are available in the top 2 inches of the soil layer.

Finally, the Hydroject seems to create faster green speeds for a day or two, similar to what a roller would do. It's a side benefit.

**GCN:** Have you done research on the effects of rolling greens?

**PR:** Yes. The increased speeds seem to last a couple days and there are no detrimental effects to rolling that often. Rollers also seem to reduce mower scalping when the grass is growing fast.

**GCN:** What has your top dressing research revealed?

**PR:** Light and frequent top dressings work best. Sand should be applied at the same frequency as thatch accumulates so you can keep the greens uniform rather

than getting a thatch-grass-thatch-grass surface. The trouble is that golf courses host so many tournaments, it's difficult for superintendents to top dress as frequently as they'd like. In cool-season areas, greens should be top dressed every two to three weeks during the fast-growing spring and fall sea-

## Q & A

sons and every four to five weeks during the slower-growing, mid-summer months. It's tough to work that in with a busy tournament schedule. But if you don't top dress regularly, you end up with layering and the need to aerify more often. Superintendents need to make their

members and customers aware that if they want healthy turf, it's either more frequent top dressings or more aerifying. If you have the right equipment, golfers barely notice the difference after a light top dressing.

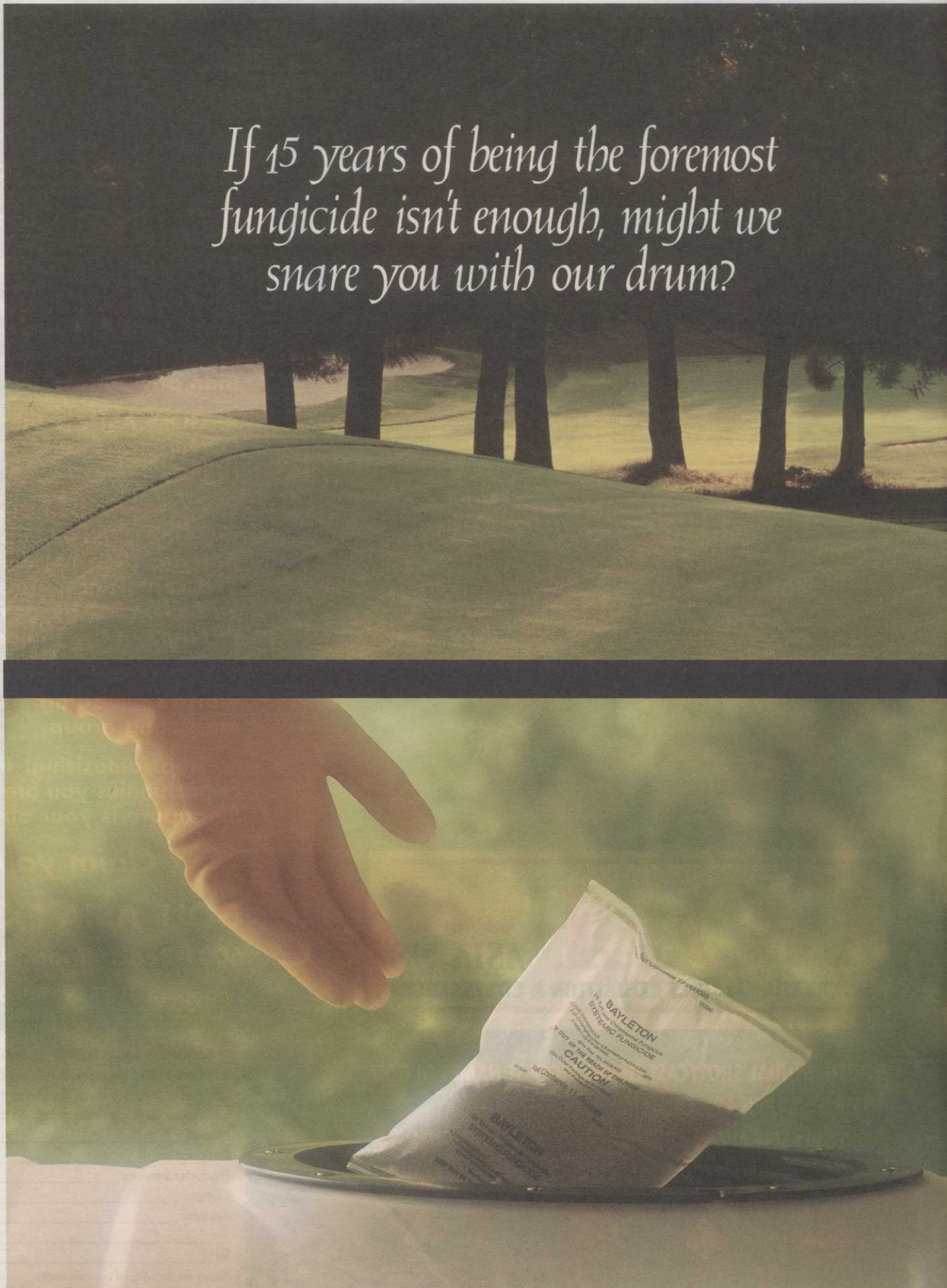
**GCN:** What is your research on alternative spikes showing?

**PR:** Clearly, especially with

bentgrass, metal spikes lift up the stolons, which slows putting speeds and causes additional wear. With alternative spikes, we see less detrimental impact. We've looked at Softspikes and Green Spikes so far. They are about the same in saving on the green. We'll be looking at many other alternative spikes.

**GCN:** What have your nutritional balance studies shown?

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# Gary's Green carries Grigg name

By TERRY BUCHEN

BURLEY, Idaho — Gary T. Grigg, past president of the GCSAA, and his brother Mark have continued on with the success of The Grigg Brothers Co., a firm their father and uncle founded when they ventured into real estate, farming and later sold their produce business in the 1960s af-

ter it became Ore-Ida Foods.

Three years ago, Mark approached Gary about branching out his fertilizer business to include high-tech liquid fertilizers for golf courses with four other partners, including Timothy D. Long, a superintendent in Austin, Texas. The rest is history.

Bio Turf Gro, a division of The

Grigg Brothers, started working with Dr. Gene Miller, an agronomist and formulator for the company and professor emeritus at Utah State University, a plant physiologist, plant nutritionist and plant biochemistry expert.

What makes Bio Turf Gro's products unique is chelating the nutrients with natural organics

for foliar feeding, which makes the nutrients go into the plant quicker and makes those nutrients more readily available.

Miller pioneered using multiple chelating agents in Bio Turf Gro's products, instead of a single chelating agent that is used in other products. Miller also recognized using a blend of all-rganic



Gary Grigg

chelating agents, instead of synthetic agents, which are a blend of organic acids, amino acids and carbohydrates acids. Formulas change from product to product, so each of the company's products has the stron-

gest chelating effectiveness and he uses enough chelating agents, regardless of cost, to chelate 100 percent of all of their products.

Bio Turf Gro's liquid fertilizers are completely balanced, for foliar or root feeding, and their No.-1 seller is Gary's Green.

Named for Gary Grigg, Gary's Green is a 18-3-4 + Iron, which has all three nitrogen sources for spoon-feeding organics and chelates. Gary recommends regular tissue testing and using a foliar feeding rate of between 2 and 7 ounces per 1,000 square feet.

"Using a foliar feeding of our products," he said, "has a distinct advantage as it is quick-acting, does not have to be watered in, does not need good root development for uptake, does not leave granules on the putting surface, is highly effective and fertilization is not affected by rainfall."

The Griggs' number-two seller is Nutra-Green 5-10-5 + Iron.

Not all of their products are liquid. 9-3-5 Bio Turf I is a totally organic granular product made of fish waste, which has the highest nutrient availability in any organic product, and is a California-certified all-organic product.

"We go to great lengths to have high-quality products, regardless of the cost, as we feel it is truly worth it as our client base will also pay good money for good products," Grigg said.

For further information contact Bio Turf Gro at 1-888-246-8873 Office; 208-678-5041 Fax and <http://www.bioturfgro.com>.



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**PR:** In sandy soils, like USGA greens, you need to introduce more phosphorus, potassium and nitrogen, because the soils simply can't hold those materials.

**GCN:** Where will the greatest changes occur for superintendents over the next five to 10 years?

**PR:** Water will become an increasingly important issue, especially delivery systems and uniform application.

There will be continuing efforts to increase green speeds. That will put additional pressure on superintendents, who are already working on the edge with these low mowing heights.

Finally, there will be increased pressure to use organic and biological controls. But golfers have to understand that these materials make it difficult to have perfect turf all the time.