

Poa Shakedown

Clemson professor offers 10 tips on how to disarm annual bluegrass

By Thomas Skernivitz
Managing Editor

As *Poa annua* paranoia creeps across U.S. courses nearly as fast as the invasive turfgrass itself, some clubs are implementing player checkpoints at the front gate. And whereas *No Shirt, No Shoes, No Entry* once was enough to weed out most of golf's bad element, the bigger worry these days is what's on those soiled shoes.

"Some courses have gotten so picky that they request golfers — before they allow them on the golf course — to wash off the bottom of their shoes and their clubs to help prevent the spread of *Poa* from previous courses played," says L.B. (Bert) McCarty. "That's kind of going to an extreme, but there are some courses that are bound and determined to not have *Poa* on their golf courses."

McCarty is just as intent to help those courses come clean. The professor of horticulture at Clemson University has researched *Poa annua* and its ever-growing impact on the sport.

"Certainly, the players know what *Poa* is today much more so than they did years ago," McCarty says. "The commentators on TV have picked up on *Poa* — good and bad — and, of course, when they start talking about it on TV at major tournaments, then Joe Blow golfer picks up on it and thinks he has a problem now. And when they know there's a prob-

lem, then of course, they start tapping on the superintendent's back more so than if they hadn't recognized it."

Compounding the situation, putting greens have become more susceptible to *Poa* because of decreased mowing heights combined with increases in mowing frequency, soil compaction and the amount of sunlight hitting the soil. Meanwhile, newer fungicides have aided *Poa* growth, while some mercurial- and cadmium-based fungicides that once kept *Poa* in check have been banished.

"Trying to keep *Poa* populations under control throughout a golf course is hard to do," McCarty says. "Out-of-play areas, in bunkers, on the lips of bunkers, around irrigation heads — those are areas that *Poa* can get very prolific. And obviously it can get tracked onto greens by machinery, golfers, a pitching wedge. ..."

The Roundup-Ready Creeping Bentgrass technology currently being tested would definitely aid the battle against *Poa*, McCarty says, but no one knows for sure when the product will receive regulatory approval. "We thought it would be here in '03, and here it is '05," he says. "We're hoping it will be here in '06 ... but maybe '07?"

Until then, *Golfdom* asked McCarty to expound on the 10 tips on how to control *Poa annua* on golf greens that he offers in his book, "Best Golf Course Management Practices."

1 Fumigate all soil mix before planting. “*Poa* is such a cosmopolitan plant that even though you think the soil may be clean, unless it comes from a very deep pit, chances are you’re going to have some *Poa* in it. So anything that you apply to greens in either construction or topdressing thereafter — certainly if it sits in the soil bed for a long period of time — needs to be fumigated. Fumigation is easy to do, obviously, if you’re constructing. If you’re not constructing, if you’re just using it for topdressing, then it’s more difficult. What I would do is probably put the sand in black plastic and let the sun heat it up. That will help reduce the viability of the *Poa* seed that may be present.”

2 Begin with and retain good drainage to prevent soil compaction and excessive soil moisture, which favor *Poa*. “There are a lot of push-up greens still out there. And members are griping about aerification more so than ever. Fewer aerifications and native soil greens help compact soil, and wet compact soil certainly favors *Poa* more so than bentgrass and can thrive in those kinds of conditions. That’s where we often see it.”

3 Use certified seed, sprigs or sod free of *Poa* when planting. “This kind of goes back to No. 1. Especially with seed, the ban-the-burn in Oregon has increased *Poa*; not only *Poa annua* but also *Poa trivialis*. *Poa* is ubiquitous — you find it everywhere — so just for good housekeeping, make sure you obtain blue-tag seed, blue-tag sprigs and sod to give you a reasonable assurance that you’re going to minimize *Poa* in those particular propagation techniques. That’s another good housekeeping thing to try to prevent a problem by not introducing it vs. having it there afterward.”

4 Obtain and maintain good turf density to reduce *Poa* invasion. “That’s easier said than done obviously. Anything to reduce sunlight that reaches the soil surface is going to reduce the optimum germination environment for *Poa*. Therefore, having a good dense turf almost always helps
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Unfortunately for the superintendent, everyone knows about *Poa annua* these days, according to Clemson professor Bert McCarty.



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reduce the ability of crabgrass and goosegrass as well as *Poa* to germinate.”

5 **Aerate consistently to relieve soil compaction.** “This goes back to No. 2. Superintendents aerify for several important reasons, and a major one, of course, is to relieve soil compaction and provide drainage. Otherwise, the population shifts to those species that can stand higher soil water, therefore less soil oxygen, and *Poa* certainly is one of those dominant species.”

6 **Use fumigated sand/soil when topdressing.** “Especially if it sits in a bin for a long period of time, there’s always outcroppings of *Poa* plants floating around in cracks of sidewalks and the corners of buildings. And when they flower, *Poa* seed can be transported very easily to those soil bins. And then if you topdress, you introduce them into the turf stand.”

7 **Use pre-emergent herbicides in spring and fall.** “The annual biotype of *Poa* germinates in late summer/early fall, so if you can get a pre-emergent herbicide out prior to germination, you’re ahead of that curve. In most cases, you’re

going to have a second flush of germination sometime in winter or early spring. Therefore, having a second application is often necessary because the initial application is broken down by the environment by spring. Thus, it’s not at sufficient levels to control subsequent germination.

Pre-emergent herbicides help maintain if not reduce the *Poa* pressure present. Perimeter areas on the course where routine mowing is lacking and herbicides are not normally used should be inspected for wild populations of *Poa* seeding. If not controlled, these seed are easily tracked back onto the golf course.”

8 **Use PGRs in spring and fall to reduce *Poa* competition and seed head development.**

“PGRs in today’s world — particularly paclobutrazol or Trimmit (2SC) or TGR (Turf Enhancer 2SC) — provide selective reduction in *Poa* growth, at least more so than it does bentgrass. And so the *Poa* kind of shrinks itself, for lack of a better term, and is not very competitive. Yet the bentgrass is less affected and therefore it can still grow and out-compete the *Poa*. As for the second part of this statement, obviously, if you can prevent seeds from developing, you have reduced the inoculum source for the next generation. So we do have PGRs such as Embark and Proxy that not only reduce competition from *Poa* but also can reduce or eliminate seedhead development if applied in a timely manner.”

9 **Hand-pick or wick nonselective herbicide (e.g., glyphosate) on small (e.g., 1-inch diameter) *Poa* plants.**

“The bingo-blotter type technique that came out several years ago has become very popular, where they use a bingo-blotter or a shoe-polishing bottle and put Roundup in it and just dab it right on the plant. It’s such a small diameter of death or injury to the plant — about the size of a nickel to a quarter — that most people just think it’s a ball mark. So the average player just doesn’t recognize it as being an herbicide application. They just think it’s ball mark damage. So, if you don’t have an excessive amount of *Poa*, that’s a good way to try to stay ahead and keep it from getting out of hand. And it’s pretty easy and cheap to do.”

10 **Plug larger spots with *Poa*-free turf.**

“With perennial *Poa*, it starts to spread by short stolons. So superintendents will take those areas — and we’re talking about a *Poa* plant 3 inches to 6 inches in diameter roughly — and they’ll go to the nursery to replace it. And if they don’t want to use PGRs or the *Poa* has gotten too big to spot treat with Roundup and it’s causing a pretty serious eyesore, they’ll go in with a regular cup cutter or one of the bigger-type turf replacers and take it from the *Poa*-free turf in the nursery and extract the *Poa*-turf from the greens and discard it.” ■

The bingo-blotter type technique of applying Roundup results in such a small diameter of death or injury to the plant that most people just think it’s a ball mark.