FACT & FICTION

Why the prevailing myths and misconceptions surrounding *Poa annua* are just as stubborn to eradicate the plant itself.

by John Torsiello

Misconceptions abound about *Poa* control, including questionable practices that can lead to disastrous results.

Mention *Poa annua* to superintendents and you get vastly different opinions. For example, in the South and Mid-South, superintendents protecting their Bermudagrass fairways and greens despise it. Those in the transitional zones and northern tier of the United States with bentgrass greens learn to control and live with it. And some in the northwest corner of the country care lovingly for putting surfaces that are 100 percent *Poa annua*.

With any grass type that is so reviled – mostly because it is insidious, aggressive and can affect green roll – and, well, at least accepted, there have sprung up some mighty misconceptions about *Poa annua* and its management.

Dr. Alfred Turgeon, professor emeritus of turfgrass management at Penn State, says these "*Poa* myths" probably date back to the early days of golf turf in the U.S. when golf course managers and players saw how difficult it was to maintain healthy turf grass in the varying climates, principally, warm temperate continental and subtropical humid, relative to the milder cool and warm temperate oceanic climates in the southeastern coastal Scotland and elsewhere in the United Kingdom and northwestern Europe. Turfgrasses, especially annual bluegrass, typically died under both summer and winter stresses. However, the contribution of diseases and insects to this phenomenon was not always recognized.

The myths surrounding *Poa annua* have been in circulation for years. "It wasn't until the 1970's that anthracnose was recognized as an important and controllable disease of annual bluegrass," Turgeon says. "The discovery of black turfgrass ataenius and the annual bluegrass weevil occurred at about that same time."

SYNGENTA

"I'm not sure how these misconceptions concerning *Poa annua* began, but it likely started with experienced superintendents who have either succeeded or failed at managing *Poa*," says Dr. John Kaminski, assistant professor of turfgrass science at Penn State. These superintendents passed information down to their employees and peers and it stuck.

Poa management programs are also regional in nature, Kaminski says. "For example, being at Penn State and in the state of Pennsylvania I have to know how to manage it and how to suppress it because depending on which side of the state your course is located the philosophy on *Poa* is completely opposite," he says.

Dr. Shawn Askew, assistant professor and extension turfgrass weed specialist at Virginia Tech University, suspects *Poa* misconceptions are passed down from one generation of superintendents to the next. Geography is an influential factor, as well.

"When it comes to *Poa*, myth or misconception often depends on where you live," he says. "What works in the South may lead to myth in the North. What works in the desert southwest may flop in the Mid-Atlantic. The reason is *Poa* control comprises more than just herbicide efficacy. Turfgrass competition, abiotic stress, and pestilence of *Poa* are all at play and interact with herbicides to ultimately bring the demise of a foe like *Poa*."

Because southern golf courses experience extreme heat, especially hot nights, *Poa* will tank pretty readily if proper turf culture and an herbicide/plant-growth-regulator (PGR) program is administered.


Turgeon

Up north, however, *Poa* stressors are less common and plants are more difficult to kill. "Complicating things further is the broad genetic diversity of the species," Askew says. "The ecotypes found in one area will differ from those in another. Such genetic differences have been shown to influence control efforts with herbicides and PGRs. Given all this diversity over a broad geographic area, myth and misconception is bound to follow."

Brian Horgan, associate professor in the department of horticulture science at the University of Minnesota, believes the misconceptions concerning *Poa annua* are rooted in management and the diversity of *Poa* biotypes.

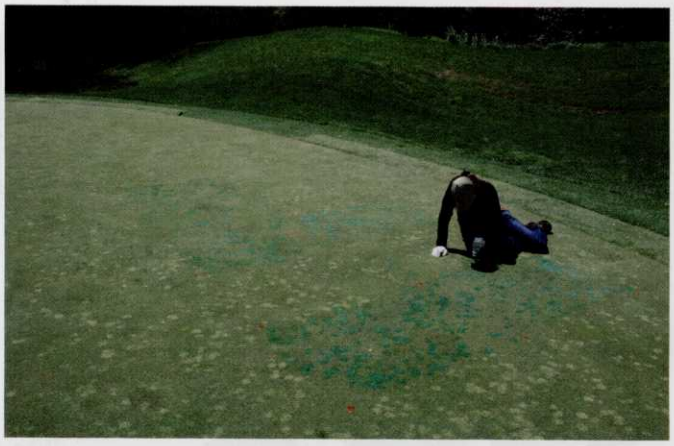
"*Poa*, like most grasses, can be conditioned to grow based on the management style," he says. "So, if you give *Poa* too much food or too much water, the *Poa* will soon require the input. Light and frequent irrigation programs will confine roots to shallow depths, when the water is turned off for a day, the *Poa* dies. Hence the myth, *Poa* needs light/frequent application of water."

And myths often compound other myths. For example, if you believe the myth *Poa* requires more water, then you over water early in the growing season causing roots to be confined to shallow depths. "As summer temperatures increase, this management philosophy would dictate even more water because of a secondary myth '*Poa* dies in the summer heat,'" says Sam Bauer, a turfgrass extension educator at the University of Minnesota. "*Poa* does not die just because of heat. Heat tolerance is reduced by increasing hydration level. More simply, overwatering in the summer causes heat stress and *Poa* death more so than any other practice. All of this from the myth that Poa requires more water."

Dennis Petruzzelli, superintendent at the Country Club of Woodbrdge in Connecticut knows all of the *Poa* myths, including the one that *Poa annua* is bad grass. "Sometimes we are forced to manage it as the primary grass type when environmental conditions cannot be improved any further to successfully promote and encourage heartier grass types," he says. "*Poa annua* can be a great playing surface, but effort, time, and budget resources to manage it consistently due to its vulnerabilities from various stresses which mostly result from its shallow root system."

Player comparisons are the bane of superintendents because they create unfair expectations, says Carmen Magro, owner and chief agronomist of Agronomy Management Solutions.

"A member or guest plays a course and has an excellent experience playing on *Poa* greens only to come home to his or her home course and see failing poa greens or fairways," he says. "The simple mistake of comparing two *Poas* with no regard for the *Poa* type, management program, resources to manage that *Poa*, micro-climates within a particular property and a slew of other things [perpetuates misconceptions]."


Poa myths and misconceptions are passed down from one generation of superintendents to the next.

Every aspect, from the *Poa* type and the way it is managed to its age, the water quality, the soil type, texture and qualities, shade patterns, direct sunlight patterns, traffic and micro-biological influences all affect how *Poa* performs as a playing surface.

"As superintendents, we understand we are managing a golf course and not an arboretum," Magro says. "In other words, we are preparing a property for the game of golf and that requires many unnatural things to occur. So when it comes to managing *Poa*, it is totally unfair to ever make a comparison between properties. These types of comparisons have led to many myths and given Poa a bad name."

Lumping all *Poa* together is

Extreme *Poa* Makeover

Penn State's John Kaminski says there are some extreme management programs in circulation that purport to magically make *Poa annua* disappear, while favoring bentgrass.

While there are chemical and cultural programs that can assist in this goal, there is no single way to completely eliminate *Poa*. Kaminski cautions that extreme *Poa* management programs usually look favorable for a year or two and then greens may ultimately decline or die and "the superintendent has to start looking for a new job." He advises to keep turf-management basics in mind and always ask to see the data. "If something looks too good to be true then it probably is," he says.

a mistake, says Laurence Mudge, a Bayer turfgrass expert. "There is a lot of genetic diversity within the grass," he says. "There are varying opinions on the grass and the proper way to manage it in every region. Even Augusta National fights *Poa annua* all the time. Some courses in the North deal with it and manage it so that it can become part of their playing surface, even on putting greens. In the Northwest, there are greens that are 100 percent *Poa*."

Poa myths lead to poor superintendent decisions, says Dean Modsell, technical field manager at Syngenta. "I've heard of superintendents trying to eradicate or manage *Poa* with products that may not be suitable for their turf or the hole's location," he says. "They become a little careless in their treatments and may over-treat their turf in the zealous urge to attack *Poa*."

"Most of the wild stuff I've heard has been about superintendents' attempts to control *Poa*," says Turgeon. "Lots of herbicides and acidifying materials have been used for this purpose, often with disastrous results. If you want to control it, you have to provide conditions that are highly favorable for the desired turfgrass. Herbicides can be helpful, but they can never substitute for a balanced and commonsensical cultural program. If you want to manage it, you have to provide conditions that are highly favorable for this turfgrass."

Askew asks superintendents to know the plant. Understanding when *Poa annual* goes to seed, when germination is likely going to occur, and what biotypes superintendents have at their facility gives them a better understanding of how to properly manage *Poa annua*. "*Poa* is about as diverse and as finicky a plant as there is, and management is going to come down to a micro level," he says. "What your neighbor does to keep the *Poa* alive (or to suppress it) is probably not going to be the best recipe for managing the *Poa* at your course."

On new greens, adopt a preventative program that uses the latest in PGR technology, and supplement that program with hand picking and foam dabbing. *Poa annua* germinates all year, but when the grass is germinating most in the fall, avoid compaction with lighter mowers, don't apply phosphorous fertilizer, and irrigate infrequently to prevent surface moisture that aids seedling survival. **GCI**

Perfect harmony

John Schreiner, superintendent Briardale Greens Golf Club in Euclid, Ohio, believes whether northern superintendents want to live in harmony with *Poa* or not they may have to do so to some extent on greens. "With the use of PGR's combined with proper cultural practices, such as frequent light topdressing, light verticutting, brushing, rolling, and double cutting there is no reason why any superintendent, north, south, east, or west, can't successfully live with *Poa* greens," he says.

In the end, after breaking down the myths and misconceptions about *Poa annua* that may be the best many superintendents can hope for.

Don't overlook the surrounding environment, says Dr. Cale Bigelow, assistant professor of agronomy and turfgrass science at Purdue University. "Consider why it is there and perhaps in many situations it is the best choice/species for that area, wet root zones, shaded areas (ABG is more photosynthetically efficient than bentgrass). Also, if you are on a program like a medication for a chronic problem, once you stop the problem is likely to return. So have a long-term plan."