Poa: Dead or Alive?

There are two schools of thought about our friend Poa annua – try our best to help it survive through the summer, or try our best to crowd it out and be done with it.

Global warming and climate change? Sunspots? Congress? Whatever you want to pin the blame on, Summer 2010 went down in the books as a record-breaker. According to the National Oceanic and Atmospheric Administration (NOAA), the summer of 2010 (June-August) was the fourth warmest on record for the contiguous land mass that is these United States. Combined with seasonal rainfall amounts which either caused us to invent new golf course drainage systems, or created new ways to effectively teach employees the art of proper hand watering, turf maintenance was the bane of many superintendents’ existence last year.

Either way you experienced it, lots of grass plants met their demise in 2010. And if you had a high percentage of Poa on your course, this was all the more evident. All the experts agree, except for the Pacific Northwest, Poa didn’t really have a chance last year in most of the country.

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As much as we may lament the trials and tribulations of co-existing with Poa (new name: Poa trialis y tribulationes), some courses – either due to preference, budgetary constraints, sheer Poa population, or some other reason – have no other choice but to do their best to keep Poa annua alive. Keep in mind that the majority of the US Open Championships for the last 10 years have been played on Poa annua greens, so it can't be all bad, right?

Certainly we can plot and plan Poa survival tactics for the coming summer of 2011, but on what do we base our strategies? Average? I'm convinced there is no average since summer weather extremes are the norm across the country. "Average" is just a figment of our collective turf management imaginations.

According to Zac Reicher and Roch Gausson, professors at the University of Nebraska-Lincoln’s department of agronomy and horticulture, the practice of proper cultivation will be the key to your success, just be very mindful of its timing and frequency. For example: to create a really solid stand of Poa, aerate in the spring and fall to bring more seeds to the surface to encourage more Poa germination. Summer aeration, on the other hand, can expose shallow roots to temperature extremes which can lead to Poa failure.

Other cultivation practices that encourage a living stand include:

• **IRRIGATION** – Lighter, more frequent irrigation to keep the shallower roots of Poa cool and hydrated. If you have staffing problems, but have proper drainage and a reliable irrigation system, you may be able to get away with setting up several syringe cycles throughout the day. Keep in mind though – proper hand-watering will always be more efficient and effective.

• **MOWING** – You have to be prudent when summer stress sets in when it comes to your mowing schedule and procedure. If it’s possible at your club, skip a day of mowing, only perform a clean up pass every other day, and switch to walking mowers (if you don’t already) if time/budget allows. Always collect clippings.

• **DISEASE CONTROL** – Be sure to include in your fungicide program controls for summer (meluidide), Proxy (ethaphen), Trimmit (paclobutrazol), and Primo (trinexapac-ethyl).

Timing of these products in respect to seed head emergence is ultra-critical, and a solid course of action is to consult with your local reps and extension agents to narrow your application dates down based on degree days, historical data and physical observation. A huge upside is the theory that suppression of seed heads creates heartier plants due to the misdirection of energy away from seed production and into plant reserves. Kevin Hicks, superintendent of The Coeur d’Alene Resort Golf Club in Coeur d’Alene, Idaho, is very pleased with his Embark program.

“After trying to manage the profuse May/June seeding with other chemical and cultural controls, I made the decision to go back to Embark,” he says. “While the application timing takes some diligence, it worked very well, giving us very acceptable control. We were quite cautious with our applications, but after seeing the results, we will expand the program in 2011.”

Hicks echoes the theory of healthier plants through seed head suppression. “Most growth regulators in this family and others have a profound effect on energy consumption (I say consumption instead of ‘storage’ because I doubt there is much storage in a plant that is maintained at 0.100”) through the course of the spring and early summer. I have read that up to 65 percent of an annual bluegrass’ energy is consumed in the seed production process. If you prevent or limit that process, it stands to reason that energy can be used for other processes in the plant.”

When Kevin was working at clubs in Arizona and Boise, ID, he was in an anti-Poa phase. His strategy was to let the Poa go through its seeding process in the spring with the understanding it would be “out of gas” by the time the summer stress rolled in, thereby encouraging its demise. “When you boil it down,” he says, “it is a matter of manipulating the plants to perform when and how you want them to.”

Doug Obermann, turf and ornamental products manager with PBI-Gordon, explains that Embark T&O is one of the most economical seed head control products on the market with a cost per acre averaging less than $20.

“At 3.2 percent AI,” Obermann says, “there is no label prohibition in regards to greens. But be careful with the Embark 2S. It’s seven-times stronger at 28 percent AI and cannot be applied to putting greens.”

“Application timing is most critical,” he explains. “Watching degree days, or using an ‘indicator area’ on your course that is a little warmer will help you decide the best time to spray.”

Obermann also talks about “bronzing,” or the discoloration that comes along with most control products. “It’s usually gone in about seven days,” he said. “You can mask it by including iron in the tank.”

Hicks says of the bronzing effect, “The bronzing is better than the white seed heads, and most golfers don’t notice anyway.”

**INSECT CONTROL**

Be sure to have a preventative insect control program in place as well, especially if there is a history of Hyperodes weevils (annua 1 bluegrass weevil), black turfgrass aetanius, white grubs, nematodes, and any other insect PBI-Gordon’s latest Hyperodes control product, Embark T&O, does a great job at 3.2 percent AI.

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that may feed on the plant or root structures.

**TRAFFIC CONTROL**

If your layout allows, use good traffic control methods to control cart/foot traffic, especially around the greens, encouraging players to alter their access to the putting surfaces from day to day. This will help to eliminate compaction and repetitive stress on the plants.

**THE STRATEGY FOR ELIMINATION**

First and foremost, to successfully have a plan for Poa elimination, you’ll need to be sure it is just that—a well-thought-out, well-funded, well-communicated plan. Depending on which stage of the program you’re in, if you miss an herbicide application or an aeration gets off-schedule by a couple weeks, you could have a major setback in your progress.

Control and elimination of annual bluegrass comes mainly in the form of pre-emergence herbicides, post-emergence herbicides, and growth regulators.

Stan Zontek, director of the Mid-Atlantic region of the USGA Green Section, has seen many turf managers achieve great Poa control success with long-term growth regulation programs that include a season-long regimen of Cutless or Trimmit growth regulation products.

“The key,” Zontek explains, “is to begin your program in the spring when growth begins and follow through with the program into the fall when the grass stops growing. Patience and persistence, without the use of bio-stimulants, has produced some pretty amazing results.”

From Professors Reicher and Gaussoin of UNL: “Preemergence herbicides applied in early fall are highly effective on the annual biotypes of annual bluegrass, as long as they are applied in early September prior to the germination window (Dernoeden, 1988.) The longer lasting herbicides prodiamine, dithiopyr, or pendimethalin will work for this, and a second application in November, December, or the following March may be required to insure control of spring-germinating annual bluegrass.”

For postemergent control, Bayer produces the widely popular Prograss (ethofumesate). Three applications in the fall spaced two weeks apart has been the norm, but there have been reports of inconsistent control at rates safe for Kentucky bluegrass or creeping bentgrass (Dernoeden and Turner, 1988).

Another postemergence product is Velocity (bispyribac-sodium) from Valent. Effective for control in tee and fairway height creeping bentgrass, Velocity becomes more effective at temperatures over 70°F, so know what your percentage of Poa coverage is in any treatment area.

Paul O’Leary, golf course superintendent at Walden Country Club in Crofton, Md., shared a story from a previous club. “We decided to try it on a ryegrass championship tee that actually had much more annual bluegrass than I realized,” he says.

“Luckily, not too many club members played from the back tees, so when the Velocity took the 70 percent of the tee that was Poa out, few people were affected,” O’Leary adds. “It actually turned out to be a good thing because I was able to make that tee a pure stand of ryegrass.”

The age-old trick in the south and transition-zone states using warm-season grasses is to use glyphosate products on dormant stands of turf. But PBI-Gordon’s Obermann warns, “Bermuda can be set back a couple weeks if it’s not totally dormant, and some superintendents are moving away from this practice due to the risk factor. But spraying on a warm winters day will definitely kill your Poa.”

Other products effective on Poa include PBI-Gordon’s new Katana (flazasulfuron) Bayer’s Revolver (foramsulfuron), Monument (trifloxysulfuron) from Syngenta, and Tranxit (pyridinesulfonamide) from DuPont.

Remember to always read and follow label instructions. SCI

Jim Black is a freelance writer and turfgrass manager living in the mid-Atlantic.