

WANTED

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.

by Jim Black

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.

There are two schools of



Top: Treated *Poa* and clumpy rye. Middle: *Poa* and clumpy ryegrass. Bottom: *Poa* seed head control. White block is the untreated area.

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.

KEEPING POA ALIVE

As much as we may lament the trials and tribulations of co-existing with *Poa* (new name: *Poa trivialis 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 Gaussoin, 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

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patch disease and anthracnose, along with your regular dollar spot/brown patch/pythium regimen.

- **VERTICUTTING** – Combined with light topdressing helps to reduce compaction and encourage root production. Healthier roots will be key going in to the summer months. Verticutting also helps to reduce seed head populations, making for smoother putting surfaces.

- **FERTILITY** – Spring and fall nitrogen is critical when annual bluegrass is most aggressive, but it is also a good idea to apply light, liquid applications during the summer months as well to keep the plants active.

- **GROWTH REGULATION and SEED HEAD SUPPRESSION** – Now comes the fun part. If you are going to choose to live with and encourage *annua* | bluegrass, you'll have to have a seed head control plan in place for the annual biotypes. Some of the products in today's market include Embark T&O

(mefluidide), Proxy (ethephon), 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

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* | bluegrass weevil), black turfgrass atenius, white grubs, nematodes, and any other insect

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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 Trimit 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: "Pre-emergence 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, 1998.) The longer



Kevin Hicks (far right), discusses his *Poa* program with regional PBI-Gordon reps Mike Sorenson (left) and Trevor Radford (middle).

DOLIG OBERMANN/PBI-GORDON

“Patience and persistence, without the use of bio-stimulants, has produced some pretty amazing results.” – STAN ZONTEK, USGA

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 70F, 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 (pyridine-sulfonamide) from DuPont.

Remember to always read and follow label instructions. **GCI**

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