

## Industry insiders take a look at encouraging new products and whether they're final solutions for *Poa* problems.

by John Torsiello

**A**weed is a plant we have not found a use for, says Robert Walker, professor of soils and agronomy at Auburn University. "There are a number of superintendents who have found a use for it and thus it is not a problem," he says. "Most golfers have a mind-set of what a perfect turf is; uniform mono-stand with an excellent green color. *Poa* infestation is totally contrary to this mind-set; poor color, clumpy, disease susceptible, abundant flowers." Hence, the ongoing efforts to eradicate *Poa annua*. The battle waged by superintendents against *Poa* goes back almost as long as there have been golf courses. Commonly found in both cool-season and warm-season regions where it attacks turfgrass, *Poa* is difficult to control and seems immune to almost everything the well-armed superintendent throws at it. Chemical and cultural techniques work to some degree, but the insidious plant seems to simply rebound despite what is done.

Significant help may be on the way. According to Walker, Moghu Research Co. of South Korea has launched a new herbicide in that country for selective *Poa* control on bentgrass putting greens and fairways. It is a post-emergence-applied herbicide with some pre-emergence activity. It controls both perennial and annual biotypes of *Poa*. The common name of this herbicide is methiozolin.

"I first tested it in March 2009 at Auburn's turfgrass research facility for *Poa* control in Crenshaw bentgrass and continue to evalu-

ate it," says Walker. "Methiozolin will be marketed in the US under the trade name PoaCure. My results with methiozolin for *Poa* control in bentgrass has been outstanding. Four to six applications at 0.5 lb ai/A has provided 95 to 100 percent control of perennial *Poa* on bentgrass greens, which have shown to have unbelievable tolerance to methiozolin. Drs. Shawn Askew at Virginia Tech and Jim Baird at University of California, Riverside, have obtained the same results with similar programs."

Walker claims PoaCure will "revolutionize" *Poa* control on bentgrass putting greens. Additionally, Bermuda grass, zoysiagrass, Kentucky bluegrass and other turfs have displayed excellent tolerance to methiozolin.

"I have also demonstrated excellent control on Bermuda putting greens of ALS resistant *Poa*. Bentgrass is the current emphasis, but as ALS resistance increases it will become a valuable tool for warm-season grass managers." Moghu Research's goal is to have US labeling in 2015.

"This year I saw a putting green go from 20 percent bentgrass to about 50 to 60 percent bentgrass in a period of six weeks (six weekly applications)," says Aaron Hathaway, a researcher assistant at Michigan State University's Hancock Turfgrass Research Center. "I never saw any bentgrass injury. I'm not sure about safety on other cool season turf grasses or warm season turf grasses just yet."

Askew says methiozolin can be "a game changer," adding, "It will be used on putting

greens and other turf sites. Exciting things are happening with this compound across the country."

Matt Shaffer, superintendent at Merion Golf Club in Ardmore, Pa., has been testing PoaCure and reports the product to be "amazing." He adds, "It takes the *Poa* out very slowly. This way the putting surfaces aren't compromised while the bent grass grows over the spots. I have used everything and done some pretty risky things to eliminate *Poa*. It wasn't frustrating some of the time it was frustrating all the time. Some chemistries work well but they become less effective the longer you use them and the rates get so high it is cost prohibitive."

Shaffer adds he hopes PoaCure ends up being a long-term solution for *Poa* control.

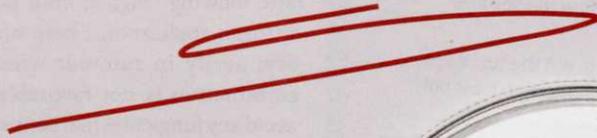
Askew also pointed to another product a potential valuable tool in a superintendent's arsenal in the war against *Poa annua*.

"Xonerate (amicarbazone (Arytsta)) just hit the market. I don't recommend it for greens but it is showing promise for green surrounds and fairways. Turf injury is weather and turf maturity dependent, but the product



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works well on *Poa*. It is best to get familiar with it before large scale use.”

“Amicarbazone is a promising new postemergence herbicide that is labeled for use in cool and warm season turf,” Hathaway says. “Amicarbazone is similar to other *Poa*-control products, like Velocity, in that it must be applied many times during the growing season and works best as application intervals are minimized (supply at seven-day intervals).”

Dr. Fred Yelverton, professor of crop science at North Carolina State University, points to products on the market and in the pipeline that can offer “some” help with *Poa*. But as with any new product, or one that a superintendent does not have experience with, he recommends that

a product be tested on a nursery green or a practice green prior to taking it onto the golf course.

“The biggest issue going forward is going to be does a superintendent actually want to kill the *Poa annua*. This may sound odd but in my view this is a more important question than what product to use. We are to the point (or will be very shortly) where we can take out *Poa annua* in bentgrass. But the question is...do you really want that? If someone has 20 to 30 percent *Poa annua* in bentgrass, then the decision is easier and is more likely to be ‘yes.’ But if you have 70 to 80 percent *Poa annua*, then the answer is more likely ‘no.’”

As for enhanced cultural practices, Hathaway says *Poa* competes well in wet, compacted, and

highly trafficked areas. Limiting nitrogen and water – especially in the heat of the summer – can give the advantage to other turfgrasses (bentgrass or Bermuda grass) as *Poa* does do well in these situations.

“There is always an ebb and flow in the advantage of one turf species over *Poa*. Bentgrasses (especially certain cultivars, like Pennncross), for example, outcompetes *Poa* in high heat and dryer years, while *Poa* gains the upper hand in cooler weather and wet periods. The key is to hit *Poa* hard when it is vulnerable (Velocity works best in the hottest part of the year) and to minimize the rise of *Poa* in the cool weather of the spring and fall.”

Traffic can’t easily be limited, but superintendents can concentrate on certain things like making putting greens bigger and moving pin placements consistently.

Matthew Sousek, University of Nebraska, Lincoln, plant science research technologist, has several suggestions to control *Poa annua* through cultural practices. Superintendents may want to raise mowing heights; limit fall nitrogen applications; keep turf dry; aerify in summer when germination is not favorable; avoid any fungicides that control anthracnose or summer patch; and limit application phosphorus, which promotes rooting of young plants (*Poa*) and seed head production.

Walker opines, “It’s all about preventing the introduction of seeds and/or preventing seed production. Anyone who has played golf when there is dew is on the grass has surely noticed *Poa* seeds clinging to the heels and soles of their shoes. As players move from course to course there is always a potential of introducing seeds.”

In the South, seeds are probably introduced in *Poa trivialis*, bentgrass and per-

haps perennial ryegrass seeds. Purchasing quality seeds is a good step towards prevention. The best seed prevention is to control *Poa* on fairways, roughs, surrounds and tees with a dense competitive turf and supplement this with effective herbicides.

Says Walker “*Poa* invades thin, weak turf readily. Herbicide choices are much better for all areas of the course than putting greens.”

Says Sousek, “For some it is feasible to reduce *Poa annua* with the products on the market today, although it comes with a cost every year to prevent it from coming back. When stands of *Poa annua* are greater than 30 to 40 percent it may be best to do a complete renovation of the green and or live with the *Poa* and manage it to keep it alive. As of now it is impossible to completely eradicate the problem, rather we have to manage it so that it stays at acceptable levels at less than five to 10 percent, depending on the course’s tolerance level.”

Theoretically, having a *Poa*-free golf course will reduce the number and intensity of pesticide applications, hand-watering and other labor intensive efforts. The savings are balanced by the cost of *Poa* control, which is often substantial.

In climates where ice cover is a concern, having large percentages of *Poa* on the golf course could mean unplayable conditions and reestablishment of the turf if ice cover is more than 40 to 45 days. A *Poa*-free golf course will also allow for drier conditions since other grasses have deeper root systems and can tolerate surface dryness better than *Poa*.

*Poa annua* may be around forever. But the very near future may hold some exciting prospects for its control, if not eradication, when and where desired. **GCI**

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## Preseason weed tips for southern courses

Some tips for controlling *Poa annua* and other weeds on golf courses in the South:

- ✓ Apply herbicide evenly in split applications.
- ✓ Do not to aerate or otherwise puncture the soil after application.
- ✓ Prior to applying the herbicide, scout out the turf a few months before, note any problem spots, then treat only those weed-prone areas.
- ✓ Pre-emergent herbicides must be watered in after applying, to create the barrier that prevents germination.
- ✓ Be aware of the tolerance level of a particular turfgrass before you apply an herbicide.
- ✓ Apply herbicide in the cooler seasons on Bermuda and zoysia grass, i.e., the fall and early spring, during the cooler part of the day, early morning or early evening.
- ✓ Corn gluten is a biological alternative that has been shown to be an effective fertilizer and pre-emergent treatment.
- ✓ Sept. 15 is a good target date for autumn herbicide applications that will limit any late fall growth and, hopefully, eliminate the need for weeding following year, although adjustments may have to be made to meet weather variables. Temperature is an important aspect of weed germination, as well as environmental factors that break down herbicides.
- ✓ Always check the label to make sure what dosage is recommended and if a herbicide product is the proper choice for the type of grass being treated.