



Centre Hills CC in State College, Pa., took a chance with a new product to control the *Poa annua* in its creeping bentgrass fairways. Photos courtesy of Chip Fogleman

(renovation)

The *Poa* predicament

Our goal is to achieve a consistent creeping bentgrass/*Poa annua* ratio across all 27 holes.

An experiment with a new herbicide at Pennsylvania's Centre Hills Country Club proves that "easy does it" is an effective approach.

It is inevitable. In this part of the country, no matter what you do as a golf course superintendent or as a course manager, and no matter how hard your grounds crew works to avoid it, ultimately, you're going to face *Poa annua* encroachment.

Our grounds team at Centre Hills Country Club in State College, Pa., knew that *Poa annua* would sneak into the picture in the years following a fairway conversion from perennial ryegrass to creeping bentgrass.

Centre Hills, a 400-member private club, hosted approximately 17,000 rounds of golf in 2013. The property covers 230 acres and encompasses 18- and nine-hole courses as well as an 8-acre practice facility, swimming pool and tennis courts. The original nine holes designed by A.H. Finley were built in 1921. To complete an 18-hole loop, a second nine designed by Robert Trent Jones Sr. was built in 1967. In 1993, Centre Hills added a nine-hole course designed by Edmund B. Ault.

In 2000, Centre Hills converted the fairways on the 18-hole course to bentgrass. Over the following years, the *Poa annua* population reached a high of 20 to 25 percent in cleanup passes around fairways, and as much as 75 percent in a greens-height nursery plot. Although irrigation controls were upgraded in 2013, giving us precise control over run times, our team is still work-



The treated fairway areas at Centre Hills CC are pictured three weeks after the third application of Xonerate.

ing with single-row fairway irrigation to maintain bentgrass, which contributes to stressed fairway edges.

Noting these challenges, we had been using paclobutrazol on fairways to control our *Poa annua* issues. In response, the *Poa* population had held steady with this treatment program.

So, what comes next in fighting this *Poa* predicament? I first learned about a herbicide called Xonerate (Arysta LifeScience) from Keith Perl with Walker Supply. In discussing the opportunity to try the herbicide at Centre Hills, I then worked with Todd Mason, with the turf and ornamental team at Arysta LifeScience, to gain further information.

Mason shared some basics with our team. He told us that Xonerate doesn't just manage or suppress *Poa annua* on turfgrasses, it eliminates it. Mason said studies have shown this product to be 90 percent effective in controlling *Poa*.

Comparing it to current products, we liked the product's greater application flexibility. There are fewer nutrient requirements, as well as less time spent watering and mowing. Additional benefits included selective removal of *Poa annua* and a shorter wait before reseed-

We realize we have a little too much *Poa annua* in the cleanup areas, which will need a slower approach to eradicate it.

ing creeping bentgrass (seven or more days after the last application). It also can be used as a post-emergence control for smaller percentages of *Poa*, while transitioning to desirable turfgrass.

Ultimately, Mason said, the product would eliminate *Poa annua*, which could lead to less pesticide use due to a possible reduction in disease and insects on our fairways.

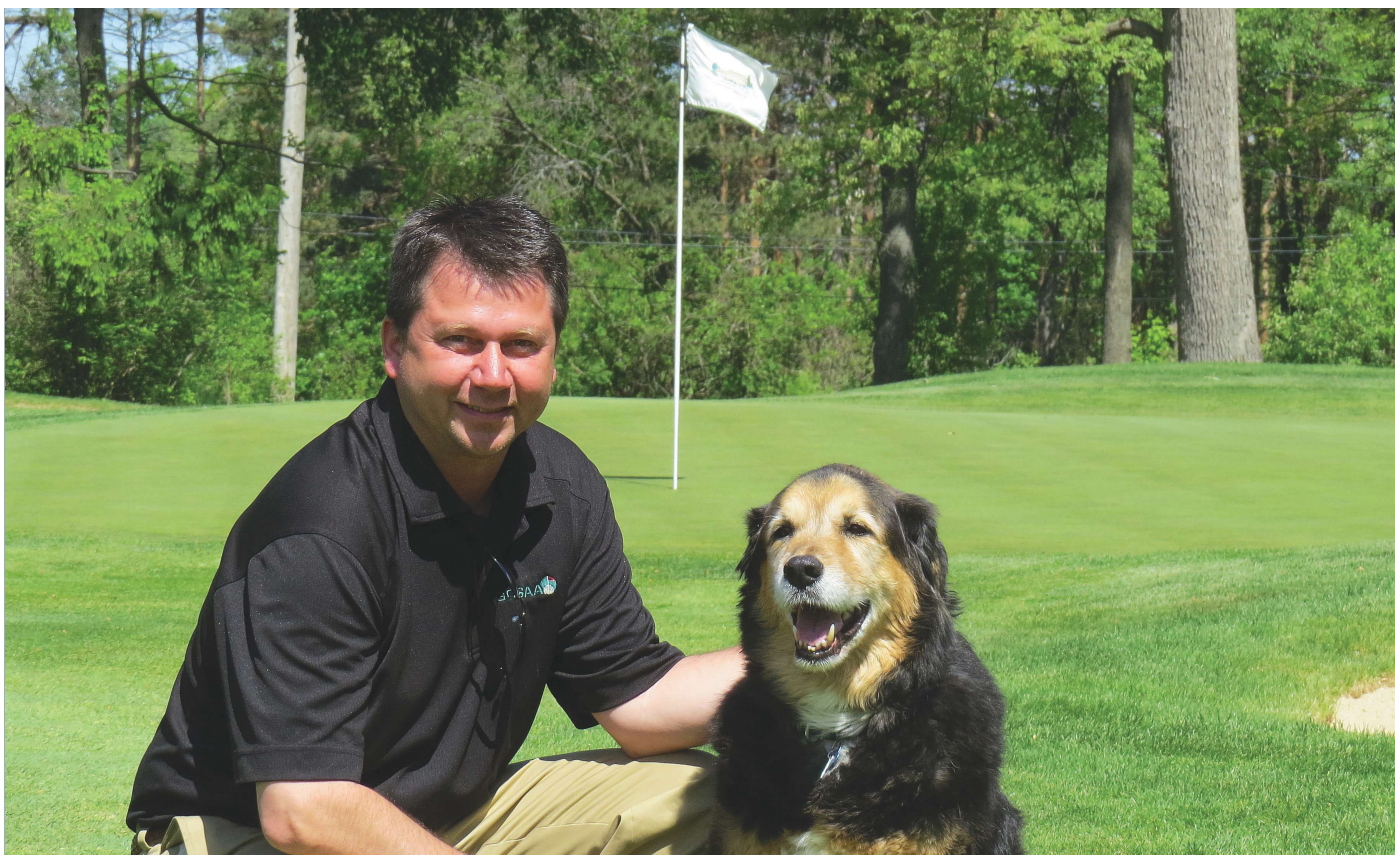
My initial thought: If it works, Xonerate will certainly help in fairway and tee use at Centre Hills. And there's also the possibility of

using this same product on greens (although our initial focus is fairways at this time; we used it in an experimental trial on our nursery green). We have 27 greens at Centre Hills, and all three nines have very different percentages of *Poa annua* mixed with the Penncross, Penn A-1/A-4 and T-1 creeping bentgrass, so if it works as well as I hope it does, this product could slowly reduce the *Poa* population in high percentage greens.

Cultural practices on the greens also help: core aeration in the spring with ¼-inch tines and in the fall with ½-inch tines to a depth of 3 to 4 inches, verticutting every two to three weeks, light topdressing every one to two weeks, needle-tining (with 0.3-inch solid tines so the holes close quickly) every three to four weeks, and lightweight rolling five days a week.

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And the science behind this herbicide made sense for us to use at Centre Hills. The product contains the active ingredient amicarbazone, which selectively inhibits photosynthesis in annual bluegrass and causes death of *Poa annua* over a 14- to 28-day period (our treatments at Centre Hills occurred over 14-



Chip Fogleman, director of golf course management at Centre Hills CC in State College, Pa., with Makai.

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day intervals), all while not affecting the cool-season bentgrass. The low residual activity of the product then allows bentgrass to be reseeded in the treated areas as quickly as seven days after the last application.

The experiment

We set an application schedule, with an initial treatment date of June 20, 2013. All applications were applied to 5,000 square feet of fairway and 1,000 square feet of nursery maintained at greens height at a rate of 1 ounce per acre. We sprayed fairways with Xonerate in two locations, incorporating the first 2,500 square feet of each. The greens-height nursery area that was included in this experiment was maintained similarly to all other greens in terms of mowing height and spray programs, but was not rolled or double-cut.

Following the first application on June 20, we followed up with a second application on July 3 and a third application 15 days later on July 18. We followed the same application re-

gime as with our first application.

The results

Along the way, Centre Hills Class A superintendent Gabe Menna and I closely monitored the treated areas following each treatment. As we anticipated, we noticed very little effect on the *Poa annua* after the first application. However, shortly after the second application, results became more obvious: The *Poa* was noticeably chlorotic and weakened. Needless to say, we liked what we saw.

A little more than two weeks later, following the third application of the herbicide, our *Poa* problem was just about resolved — the *Poa annua* plants were near total annihilation.

We had planned a fourth application, slated for Aug. 1, 2013, but in evaluating the situation with Menna and Centre Hills spray technician Tom Finlay, we decided not to go with this fourth treatment due to the high percentage of *Poa annua* in the cleanup areas in our fairways, as well as the high percentage

within our greens-height nursery plot. In this area, summer is a tough time of year to try to grow bentgrass into bare spots. We knew after our third application we were close to having too much “destruction” on some fairway areas and our greens nursery, so we concluded our use of this herbicide for the season. With this in mind, we will adjust the rate in our second season using Xonerate for a slower, more gradual removal of *Poa annua*.

Each course brings different circumstances. Other superintendents might decide, after evaluating their fairways and other areas, that they will need a fourth Xonerate treatment to knock out their *Poa annua* issues. I would suggest talking your situation over with your local product representative or Arysta LifeScience sales representative for guidance.

Our next steps

Overall, I am very pleased with the results on the fairways following our first use of Xonerate at Centre Hills. As I finish writing this article, we are well into spring. In this part of the country, we went through a very harsh winter with temperatures that were well below average — below 0 F on many days. My problems are not as severe as those of many of my colleagues, but the extreme cold blasted one particular strain of *Poa annua* at Centre Hills. Although we still have four or five other strains on the course, it appears that one, at least, will not survive.

I consider myself lucky that we now have only a small percentage of two greens that are of concern. We realize we have a little too much *Poa annua* in the cleanup areas, which will need a slower approach to eradicate it. This summer we will undertake a similar “experiment” to counter any *Poa* problems we may face in 2014, scaling back to a lower rate of 0.5 ounce per acre to see if we can slow the *Poa annua* suppression rate. This will hopefully aid in not removing too much *Poa annua* at once in order to maintain our course with a manageable amount of disruption to the playing surface.

Chip Fogleman is in his eighth year as the golf course and grounds director at Centre Hills Country Club in State College, Pa. He is a 12-year member of GCSAA.

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