Gambusias worth their weight in mosquitoes

By MARK LESLIE

CHESTERTON, Ind. — So, you’ve tried the “air” approach — the hat, purple martin and tree swallow houses are all installed — but the mosquitoes are still bugging golfers and the grounds crew alike. How about trying the “water” approach, getting the little pests before they take flight?

That’s what senior ecologist Robert Walker-based J.F. New & Associates here recommended to superintendent Don Ewoldt of Sand Creek Country Club in Chesterton. The water approach entails transplanting the little-known Gambusia affinis, commonly known as mosquito fish, to Sand Creek’s ponds and wetlands. Gambusia could become the superintendent’s best friend at golf courses with still, or slowly moving water — the best breeding ground for mosquitoes.

Since their mouths are located on top of their heads, the Gambusia eat mosquito larvae off the water surface before they hatch. And since they grow to a full size of 1 to 2 inches, they can reach very shallow water that larger fish can not.

Also, they are tolerant of poor water-quality conditions and don’t need much oxygen.

When we deal with golf courses, they are always concerned with mosquitoes and want to drain the wetlands, Wolfe said. “But you can’t do that.” Mosquitofish are one piece in the control puzzle. I recommend purple martin, tree swallows, bats and

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New zoysiagrasses fulfilling prophecies of the past

By MARK LESLIE

BELTSTVILLE, Md. — You could call it The Zoysiantes Prophecy. And in this case, it came true.

“Two years from now,” Dr. Milt Engelke of Texas A&M University told Golf Course News in 1994, “more vegetative types will come on line, and they will use 20 to 30 percent of the water required by Meyer, which translates to 50- to 70-percent less water than used for hybrid Bermudagrass. These also will have excellent cold hardiness and very low fertilization requirements.”

In the late-summer of 1996, Engelke has proven prophetic. In the spring of 1999, “it’s all true,” he said. “Actually, I’m known this for five years. We’ve just been taking a long time getting them [zoysiagrasses] out.”

A more moderate Susan Samudio, head of JacklinGolf’s zoysiagrass breeding program since 1990, concurred: “We’ve made tremendous advances in seed production. But if you compare them to cool-season grasses, it’s still extremely low. We’re almost to the point where we’re satisfied

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Vargas on gene injection, other modern advances

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After trying to convince them we conducted the experiment other modern advances they were wasting their money, you apply it before the oil reaches the hour of the spill, plants didn't anyway. They were right. If we die. Peat Sorb is so effective in absorbing hydrocarbons, that if the injured foliage occurs very quickly for the uninjured crown. Recovery of quickly for the uninjured crown. The plant will live. Recovery of the injured foliage occurs very quickly for the uninjured crown.

GCN: How is your GCSAA-funded research progressing on a cure for crown-rotting anthracnose?

JV: GCSAA has a new policy of matching funds donated by local chapters for practical research. Crown-rotting anthracnose (CRA) has become a major problem on U.S. putting greens. The increased incidence of CRA is probably related to close mowing heights, which puts stress on the plants, and the high-sand content greens causing wounds that allow pathogen entry into the plant. Control for many years was high rates of thiophanate-methyl drenched into turf. However, in the past couple of years, the CRA fungus has developed resistance to this chemistry. This research will hopefully lead to a better understanding of the disease and more practical ways of managing it.

GCN: What do you think of the way the USGA and GCSAA allocate their research dollars? Is there something they could do to improve the process?

JV: The USGA has done a great job of spreading the money around U.S. universities on worthwhile projects. Bringing Dr. Mike Kenna on board as research director turned the program around because you had a full-time academic person who understood research. [National Director] Jim Snow deserves credit for convincing the USGA's executive committee of the importance of continuing support for turfgrass research. GCSAA is just back in the business of supporting research. They likewise have a former academic heading their research program, Dr. Jeff Nus, who was involved in university research before he went to GCSAA. Having input from local GCSAA chapters on their research needs helps money go to worthwhile projects.

GCN: Your book, Management of Turfgrass Diseases, is generally considered one of the best turfgrass science books on the market. Do you have plans for any additional books?

JV: I am writing a book dealing with pesticides and how they relate to human and animal health products, as well as how their toxicity compares to the food we consume and the everyday products we use around the house.

GCN: In what areas will the major advances in turfgrass research come over the next 10 years?

JV: The major advances will come in the areas of turfgrass breeding and biological management of pests because of genetic engineering and our ability to move genes from one species to another. Several researchers have creeping bentgrass plants that are resistant to Roundup and Finale. Imagine a creeping bentgrass cultivar resistant to either one of these. You can spray your creeping bentgrass once a month and not worry about annual bluegrass.

Eventually, we'll be able to put BT genes or endophytes into creeping bentgrass, which should eliminate cutworm and soil webworm problems. We have many good biological-control agents, and with technology like the Bioject, and others yet to come, biological-control agents will be delivered in a timely and efficient manner.

As good as some of the biological control agents are, we should be able to genetically engineer even better ones. This does not mean all our problems are over. There are regulatory problems in getting these products released. Resistance by weeds, insects and fungi will inevitably occur to the genetically engineered plants and microbes. But there should be others coming on stream all the time to replace them. The next five to 10 years are going to be the most exciting we have ever seen in the turf industry.

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