Bunker mister systems are becoming a standard at higher-end facilities. Photo: Willow Oaks Country Club

Klich, Landscapes Unlimited project manager who installed the system at Willow Oaks, Oak Hill Country Club in Rochester, N.Y., and Woodmont Country Club in Rockville, Md.

"Bunker faces, like greens approaches, are hot spots on the golf course the superintendent would like more control over," Klich says.

HOT SPOTS

The misters also improve south-facing bunkers that dry out quickly, says architect Steve Smyers, who installed misters at Interlachen Country Club in Winter Park, Fla., this year.

Pignato also has incorporated misters in a design at Quail Hollow Country Club in Charlotte, N.C.; the Country Club of Charleston, TPC at Sawgrass in Jacksonville, Fla.; and Frederica Golf Club and Ocean Forest at Sea Island on St. Simons Island, Ga. But his first exposure to the idea came at Bear Lakes Country Club in West Palm Beach, Fla., where he and superintendent David Troiano came up with the idea.

"Although we've been doing it for awhile, it just started down here in Florida where we noticed bunkers, being sand-based, typically wick the water away from the turf that surrounds the bunker or bunker complex," he says. "It's similar to what you see when you try to grow turf next to a parking lot. The heat of the lot dries out the turf."

A WORTHY INVESTMENT?

Michael Larsen, CGCS, at Woodmont Country Club in Sykesville, Md., where misters were installed near all 66 bunkers during an irrigation project last winter, gave them a "good" but not an "excellent" rating.

"You're able to put the water right where you need it – on the bunker face … and you're able to get low-infiltration rates on steep slopes rather than putting a lot of water on them and having it run off," he says. "But the misters tend to clog a little more."

Taking the misters apart is more of a nuisance than a time-consuming chore, Larsen says.

Many clubs will cut bunker misters from tight budgets, Pignato says. But Fuller, who first became familiar with bunker misters a decade ago at New Albany (Ohio) Country Club, considers them a worthy investment. He estimates the cost to be $600 per average-sized bunker (1,200 to 1,500 square feet) – there are 59 bunkers at Willow Oaks. From another point of view,

Bunker misters are part of the need to further segregate areas of a golf course that need to be irrigated differently. Photo: Willow Oaks Country Club

George suggests course officials look at the misters as a water-conservation effort.

"Most of the golf courses that choose to use these will spend the money and install tee syringes to irrigate tee tops separately from tee surrounds," Pignato says. "The goal is to further segregate areas of the golf course that need to be irrigated differently."

GREENS APPROACHES

Aside from bunkers, greens approaches have special irrigation needs because they're one of the most abused areas on a golf course, Fuller says, adding the majority of equipment turns are in that area.

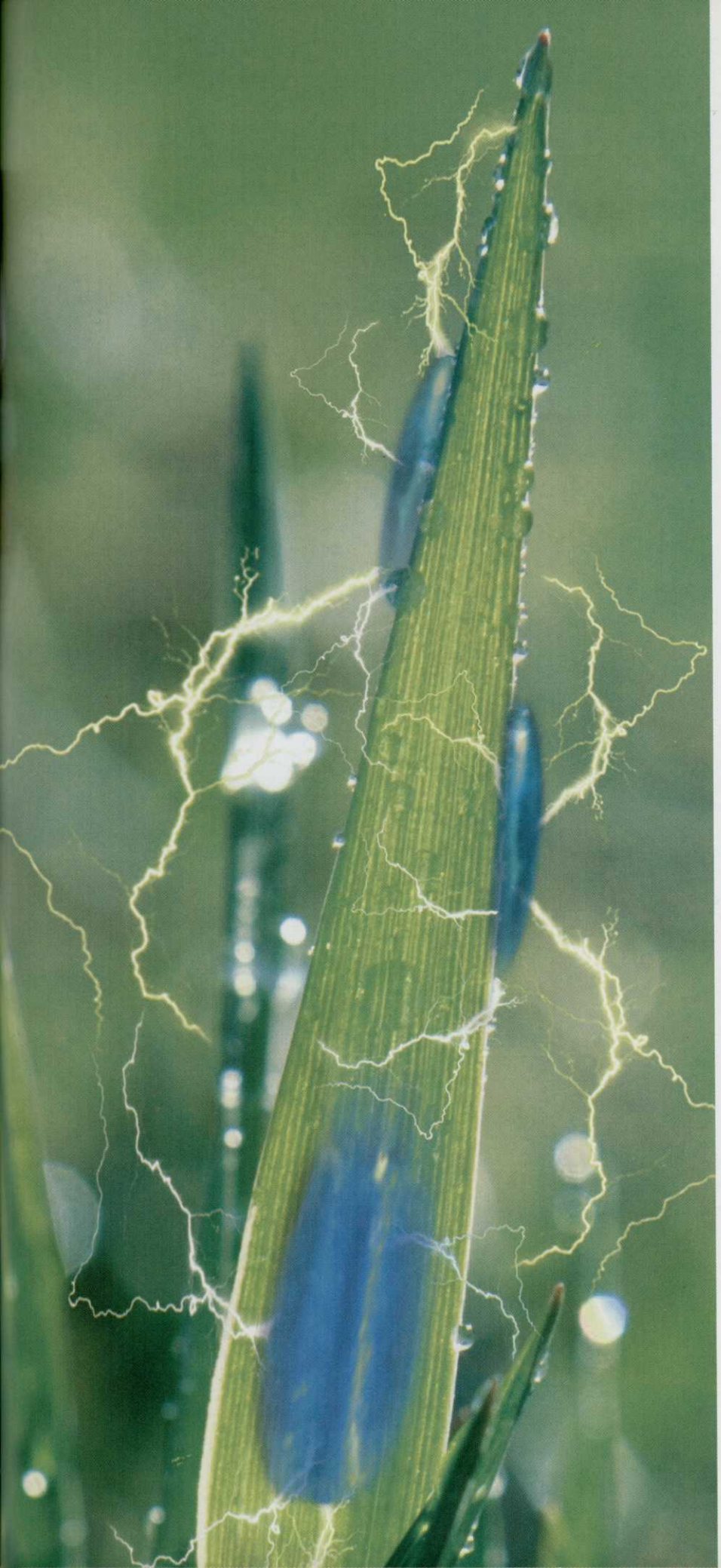
"Generally, the irrigation is doubled in that area – your outs from the green are spraying out into the fairway and rough, and the heads in the fairway are throwing water up to the green," he says. "The result is the approach areas are overwatered generally."

Because of that overlap, a watering system was installed in the approaches at Willow Oaks to better control the turf quality in that area, as well as the bunker faces.

"We figured we could solve 75 to 80 percent of the issues we have there by putting in a specific irrigation system just for the approaches," Fuller says. "We could have gone to the extent of making a miniature green, if you will, out onto the approaches, with six or eight inches of sand base, but that's cost prohibitive."

The approach-mister option costs about $2,000 per hole for an average 4,000-square-foot approach, and it was well worth it, Fuller says.

"All I have to do now during grow-in is hit a button to water for six minutes and accomplish what it would take a crew member 45 minutes to an hour to do." **GCI**



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BACKING IT UP

Chemical manufacturers support their products with research and sales reps.

BY JOHN WALSH

It's no secret chemical manufacturers support superintendents and the industry in various ways. Some are sexy, such as sponsorships, events and seminars. Some are less sexy but perhaps more important. For example, conducting research and providing qualified sales/field representatives might seem basic, but many superintendents say the benefits are critical.

At it's development and training facility in Clayton, N.C. – which has four golf holes and turf plots with a mix of push-up greens and USGA-spec greens – Bayer conducts research on warm- and cool-season turf, including comparable treatments for herbicides, insecticides and fungicides. The company continually brings customers to the facility demonstrating its support of the industry, says Scott Welge, director of marketing for the green professional business.

"We showcase the Clayton facility with current customers first, but the facility also is available for those who don't know Bayer, and it gives us an opportunity to show customers what we offer and can do," Welge says. "The research there is somewhat different than other places. We can replicate real-world situations in a matter of hours, when needed, in addition to normal research plots. There's a lot of work on product improvements, spray volume, surfactants, irrigation, application timing and tank-mixing compatibility. We provide meaningful feedback about superintendents' issues."

>> This is the second part of a two-part article about how chemical manufacturers support the industry. The first article appeared in the November issue on page 56.

The facility also allows Bayer the flexibility it needs.

"We can run trials mid-season and have the availability of the turf and other needed resources during the season," Welge says.

Research also is important when it comes to introducing new products in the market. University researchers and research cooperators are involved early on with product development, and after a product is launched in the market, unbiased research is needed to compare new products with competitive ones.

"We present our research as internal or external, or a combination of both," Welge says. "Work done at universities is public information. Internal research is sometimes used but clearly noted in any information released externally. Each of the field sales reps have access to the data. If it's a specific product or data, a superintendent usually asks a research cooperator, distributor sales rep, field sales rep or technical specialist to obtain the efficacy data."

Because Dow's global headquarters is in the U.S., the company's research starts in the country. Once concepts are developed, they're tested at universities to validate the company's products and claims. The research information is disseminated through field days, newsletters, local sales reps and local superintendent meetings.

"We have a new major work effort with Purdue," says Mark Urbanowski, senior marketing specialist for the turf and ornamental business. "We don't publish a lot of our own research because people think they know what you're going to say. The information that comes through the universities is more important."

There's a lot of internal testing during the eight to 10 years of product development before the company markets a product.

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Syngenta's research is done corporately and locally with universities. Company technicians have relationships with university researchers who work together to enhance and improve products.

"We take research at universities and our research and put it in a format to take to superintendents," says Dave Ravel, golf market manager.

Chemical manufacturers test their products internally and externally before marketing them to superintendents. Photo: BASF

"We put together all the research information, and our tech reps write agronomic programs based on that. And with GreenCast, we can offer a suggested spray program, for example, for superintendents."

The company also has field technical managers, such as Michael Agnew, Ph.D., and others who publish research articles in various magazines and journals that reach superintendents.

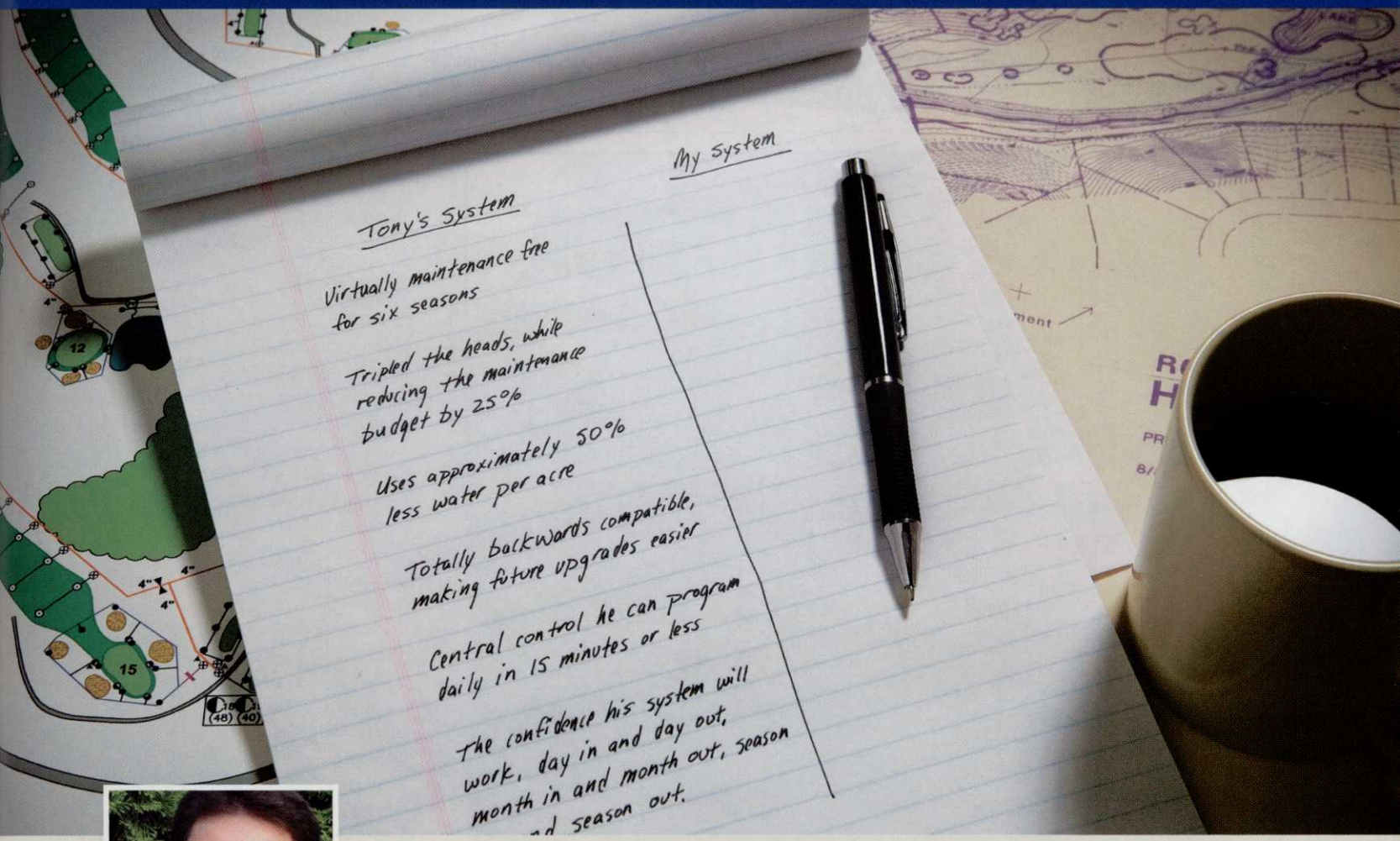
DuPont Professional Products conducts a lot of research with universities, says Chuck Silcox, Ph.D., turf and ornamental product development manager. The company spent millions of dollars on efficacy trials during the past five years, which ultimately is a benefit to superintendents.

"We do most of our turf field research externally," Silcox says. "It's more effective to invest in outside research to provide superintendents with reliable data as we launch products into the market. We touch most of the major universities. And because of our relationships with universities, I can call upon researchers to share their expertise with superintendents who contact DuPont seeking advice. We're a conduit of information."

The company disseminates its research through sales reps, associations, distributors, Webcasts and even one-on-one with superintendents.

Cleary Chemical works with 20 different universities and has an extensive research-and-development budget, according to president Mary Ellen Warwick. The company also has superintendents test a product before it goes to market. Research data from the past 15 years is housed in a database that can be cross-referenced, and the company's sales reps have

Doing your homework still pays off.



Tony Girardi, Certified Golf Course Superintendent (CGCS), Rockrimmon Country Club, Stamford, CT

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access to the data via laptops.

"We do some of our own research," Warwick says. "We don't have an R&D staff, so we work with researchers. Superintendents are looking for test results and how you stack up against the competition. How and why a pesticide is made isn't as important to them."

In addition to university research, the company tests products on its own 18-hole public golf course, Tara Greens Golf Center.

BASF conducts internal research in California and North Carolina, as well as external research at various universities and FarmLinks. It also conducts research directly with superintendents.

"If a superintendent has a problem and thinks outside the box, we'll take him up on that and conduct research with him," says Toni Bucci, business manager for the T&O division of the agriculture division. "We work with credible researchers, yet there's value in doing research with smaller, lesser-known researchers because there might be something in a particular area that needs to be addressed."

Researchers usually don't put off the company because they're too busy with other work, Bucci says.

"They're just as excited as much as we are to test new products," she says. "There's a sense of pride in the research and being able to test it and recommend it or not."

Bucci says there's always a need to do more research about tank mixing because it's a common problem and new turfgrass varieties can be sensitive to a tank mix that worked fine on another grass.

BASF disseminates its research information through its sales reps, tech sheets, Web site and university research field days.

At FMC's Princeton, N.J., facility, scientists are working on new formulation technologies and delivery systems. And all current company projects are in testing through the university system, says Rick Ekins, product manager for turf and ornamental.

"The last herbicide we launched, Echelon, was tested at 12 universities in more than 60 trials nationwide, and that's just the 2007 data," he says.

University researchers are supportive of the company's initiatives.

"They have their own traveling circuits and share data with superintendents as they present their findings," Ekins says.

HUMAN TOUCH

Much like research, sales representatives are another area of support from chemical manufacturers superintendents can rely on to help do their job better. All chemical manufacturers' reps have a wealth of technical experience and related degrees. Many are former superintendents. Companies' sales forces range in size from less than 10 people to 30. And all companies train distribution sales reps.

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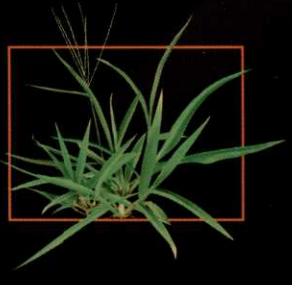

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Chemical manufacturers' sales reps, many of whom are former golf course superintendents, put their reputations on the line with the recommendations they make.

For example, FMC doesn't hire salespeople right out of college.

"We seek seasoned people with varying experience who are respected in the industry," Ekins says. "Some have been distributors before, and some are out of the university system."

Part of Bayer's sales training program is to educate reps so they know the company's products as well as the competitors.

"If a superintendent has a particular question, our field reps will walk the course with him," Welge says. "If the field rep can't answer the question, he'll call on a technical specialist, who is also in the field."

Superintendents want to know about new pests, new product recommendations and how other superintendents are dealing with a common problem, Welge says.

"Our field sales reps reputations are on the line every time they make a recommendation," he says.

And because Bayer sells its products through distributors, the distributor sales reps provide valuable product and agronomic information.

"We provide distributor training about our products and emerging pest problems as well," Welge says. "Superintendents have a lot more contact with the distributor sales reps throughout the year, so we actively work with the DSRs, so at every point of contact, the superintendent has the most updated information."

Dow's reps are involved in local superintendent chapters, educational sessions and help superintendents work through environmental or pesticide regulations.

"We hire a mix of employees that come in at the sales level," Urbanowski says. "Some come from agronomic schools, and others come from business schools, although someone with an ag degree hits the ground running faster. The business guys go through short courses on the technical side. We rely on the expertise of the distribution reps, too. We hire the best people and rotate within the company but keep a good balance of turf specific guys in the field."