

**PART ONE
OF A
THREE-PART
SERIES**

Mining for

Chemical companies say they are as committed as ever to the golf industry, despite a down economy and potential new environmental regulations

**BY LARRY AYLWARD,
EDITOR IN CHIEF**

Molecules

IF

you were a chemical company that manufactures pesticides for the golf course maintenance industry, how would you approach these tumultuous times?

The general economy continues to limp along, and the limp is getting worse. The golf economy is hobbling as well, with rounds and revenue down at golf courses across the nation.

And then there's the Democratic-led U.S. government, which controls the presidency and Congress. A lot of people believe the environmentalists in Congress, including Sen. Barbara Boxer (D-Calif.) and Sen. Harry Reid (D-Nev.), are anti-pesticide and aim to impose tough, new regulations.

Again, if you were a chemical company, how would you approach these tumultuous times?

"The only thing I'm certain of is that there's a lot of uncertainty facing us over the next five years," says Owen Towne, president of Phoenix Environmental Care in Valdosta, Ga.

But that's not stopping Towne and his chemical market peers/competitors from moving ahead with future business. According to several chemical companies, including the new and the old, they're doing anything but packing it in on the golf course maintenance industry. Chemical companies say they continue to invest in the industry because there's a future need for their pesticides.

"For the golf industry, I would contend we're putting more dollars into research and development now than we ever have in the past," says Toni Bucci, business manager for BASF Professional Turf & Ornamentals in Research Triangle Park, N.C. "We wouldn't be putting in the dollars that we're putting in today for the future if we didn't think there was a future."

"My research and development budget is as strong today as it has ever been," says Chuck Silcox, the global turf and ornamental product development manager for DuPont Professional Products in Wilmington, Del.

Scott Welge, director of marketing of green professional products for Bayer Environmental Science in Research Triangle Park, says Bayer is dedicated "as far as the dollars we're going to invest."

"That's our livelihood ... new products and new revenue," Welge adds.

Dave Ravel, golf market manager for Syngenta Professional Products based in Greensboro, N.C., says the company is already committed to "10 years out" in the golf course maintenance industry through products it has in the pipeline.

"We're investing in R&D as much as we always have," Ravel says. "At the same time, we're looking at all of our cost structures. We need to make sure we make good business decisions."

Mark Urbanowski, senior marketing specialist for turf, ornamental and technical products for Dow AgroSciences in Indianapolis, says new pesticides may not be coming as fast to the market as they have in the past, but they're still coming.

"We definitely have goals of introducing new actives that will be beneficial to the golf industry in the next five to 10 years," Urbanowski says.

Newer companies to the industry such as Walnut Creek, Calif.-based Valent U.S.A. is committed "more than ever" to the golf course industry, says David Frye, Valent's vice president of market-

About the Series
Throughout the past few months, *Golfdom* Editor in Chief Larry Aylward interviewed the top representatives from many of the golf course maintenance industry's chemical companies and pesticide manufacturers to report on their collective future in the industry. Aylward uncovered so much information that the story is running in three parts. **Part one** examines the chemical companies' commitment to the industry and what new pesticides are on the horizon. **Part two**, running in April, analyzes the challenges chemical companies are facing in this day and age. And **part three**, running in May, discusses the continued negative stereotype that chemical companies face within the golf industry regarding pesticides and what they need to do about it.

Mining for Molecules

Continued from page 19

ing. "There's a clear research and development effort to bring new products to market."

Arysta Lifesciences, another new company to the golf industry that's based in Cary, N.C., is "fully committed to the golf course maintenance industry," says Mike Maravich, Arysta's marketing and product manager for turf and ornamentals.

So if there's a firm investment and commitment from chemical companies for continued research and new products, what does this mean for golf course superintendents? It means a few things, for sure, if not several.

First, it means a continued — and probably more intensive — focus on superintendents' needs, especially in a more competitive industry because of the decline in new golf courses. It also means new pesticides with new modes of action. And it means chemical companies will continue in their collective quest to introduce environmentally friendly active ingredients that require low-use rates, including nontraditional products.

In terms of meeting superintendents' needs on their golf courses, chemical companies realize their business models begin with the customer service component. Never has the customer been more important, especially in a specialized market with many suppliers and products, than they have now.

"The business is constantly changing," says Tom Hoffman, vice president of commercial sales and product development for Kansas City-based PBI/Gordon. "We're constantly trying to find out the problems superintendents are having."

"We know we have to continue to

build products that not only provide some solutions, but offer all the things customers are looking for," Arysta's Maravich adds.

Ravel says Syngenta will "do what we can to know what superintendents' needs are and try to anticipate what they need next." And it's not just about bringing new active ingredients to market, Ravel points out. It's also about improving everything from product formulations to product packaging, he says.

Bucci says it's BASF's job as a basic manufacturer to provide innovation to superintendents. "That's what our customers should expect from us," she adds.

Their customers might also expect chemical companies to give back to the golf maintenance industry, which many companies do.

"We give back a significant portion of our funds to the industry in terms of industry support and grants to trade shows and sponsorships," Towne says. "That resonates with superintendents."



Superintendents appreciate it when companies give back to the industry, says **Owen Towne**, president of Phoenix Environmental Care.

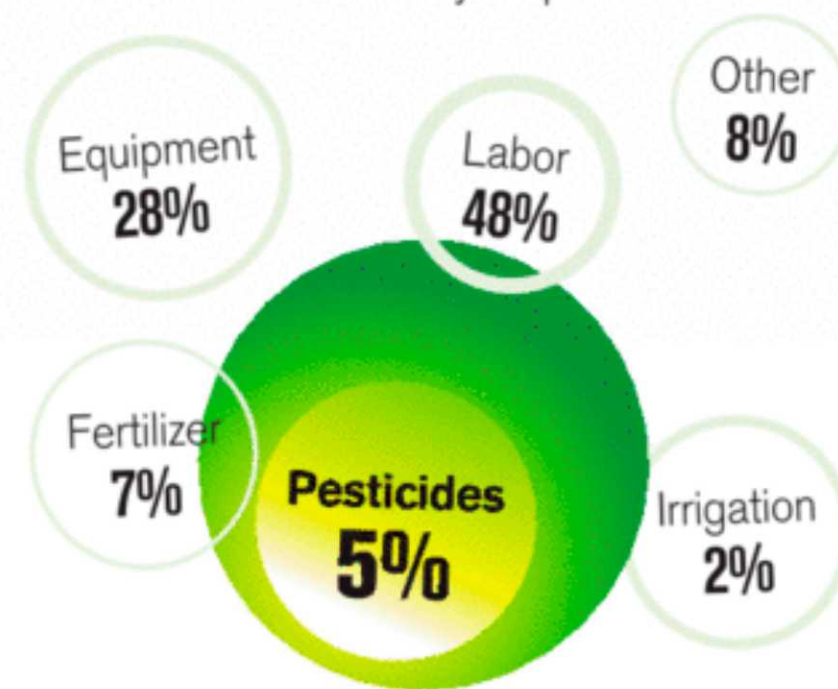
Bayer's Welge is not blind to the fact that superintendents have had to reduce their maintenance budgets. Hence, it's up to chemical companies to prove their products and services are "highly valued" in order to receive a piece of the maintenance budget pie, he notes.

Along that line, Pedro Perdoma, director of research and regulatory affairs for Dayton, N.J.-based Cleary Chemical, says his company's No. 1 goal is to maintain a strong dedication to customer support. Its No. 2 goal is to broaden its portfolio with products that complement its existing line. Perdoma says Cleary plans to develop new active ingredients with new modes of action.

Of course, other chemical compa-

Pesticides NOT on the Chopping Block

The good news for chemical companies that manufacture pesticides is that most golf course superintendents plan to still use their products even if they must cut their maintenance budgets. We recently asked 650 superintendents: **What is the area of your budget you're most likely to cut if asked to do so?** Here's how they responded:



nies aim to do the same. And when things get cooking in the R&D labs, there's no better time.

"It's a real exciting time at DuPont," Silcox says. "Our discovery team is just kicking these molecules out left and right."

A new mode of action is always viewed favorably in the marketplace, especially when there are pesticide resistance issues to solve, Silcox adds. Perdomo says Cleary Chemical is working to develop new pre-mixed products to reduce pesticide resistance problems.

Other manufacturers are honing in on developing a class of pesticides. For instance, Welge says Bayer is concentrating on herbicides in the short term. Bayer also wants to utilize its StressGard formulation technology, which helps turfgrass better withstand stress, to continue to build existing products "into something better," Welge says. "The term we use for that is 'proximity innovation.'"

Bucci expects future products will make turfgrass more healthy and tolerant to various pests such as bacteria, fungi and drought. Valent's Frye expands Bucci's list to include pesticides that can help save labor and water in addition to their duties of battling disease, insects and weeds.

Continued on page 22

Mining for Molecules

Continued from page 20

Maravich says Arysta is concentrating on discovering products to “reduce the load of active ingredient applied to the ground, but not hindering the performance of the product.” Like Bayer, Arysta is focusing on herbicides in the short term, and Maravich says the company is working on a product for *Poa annua* control.

Even though Raleigh, N.C.-based Quali-Pro focuses on post-patent chemistry, Russ Mitchell says the company plans to introduce patented chemistries in the future. But Mitchell, the company’s product and marketing director, expects fewer pesticides to be introduced in the next five to 10 years than in the past. Mitchell expects fewer pesticides because “we have a pretty good arsenal of quality products to take care of about everything.” That said, Mitchell predicts superintendents could one day soon see a glyphosate-resistant bentgrass.

Bucci says BASF is researching products “outside traditional plant protection compounds or traditional pesticides.”

“We’re looking for products that are targeted and will not affect nontarget organisms,” she adds.

Welge says Bayer is also committed to traditional and nontraditional research.

“We’ll continue discovering synthetic products and bringing them to market,” Welge says. “These newer products will have lower use rates and less impact on the environment. We will also invest and focus on alternative-control solutions. This could be more biological or something that’s nonsynthetic in nature.”

Ravel says Syngenta is also considering nontraditional products.

Most all pesticide manufacturers aim to develop active ingredients that

are less toxic and have more favorable environmental profiles without sacrificing performance. DuPont has introduced two new insecticides with reduced-risk classifications by the Environmental Protection Agency. A new herbicide that exhibits the criteria for a reduced-risk product is on the way. Reduced risk not only means the pesticides are virtually nontoxic on birds, fish and aquatic life, it also means they made it to market faster.

Urbanowski says Dow is “clearly focused” on developing and releasing new products with the reduced-risk classification as it is with penoxsulam this year. “It’s a category for registering active ingredients with better environmental profiles,” says Urbanowski, noting that Dow has four such products available to the green industry.

Mitchell says the trend is toward “rifle-shot type products with narrow spectrums and low application rates of active ingredients” — with no talk of fish and bird kill potential on the products’ labels, of course.

Mitchell goes to bat for some of the veteran pesticides, saying they’re safe as long as they’re used according to label. For instance, Mitchell calls chlorothalnil the industry’s “lifeblood fungicide.”

“Everybody who has a stake in that product is trying to make sure we have it for the next 50 years,” he adds.

The industry still needs a few broad-spectrum products that aren’t as prone to resistance as some of the newer chemistries, Mitchell contends.

“We need to steward the old products to make sure they’re around as long



Scott Welge says Bayer is concentrating on herbicide development in the short term.

as possible,” Mitchell says. “And superintendents must do their parts and not put down more product than they need to put down.”

It’s possible for companies to discover and bring to market

more broad-spectrum control products that are environmentally safer? “Companies would relish the opportunity to do that,” Silcox says.

But he questions whether such products could be environmentally safer. “Then again, when I was a graduate student 25 years ago I don’t think we could have envisioned Acelepryn,” he says of the company’s new reduced-risk insecticide for white grub control. “So sometime in the next 25 years, there’s probably going to be a fungicide developed that fits that description.”

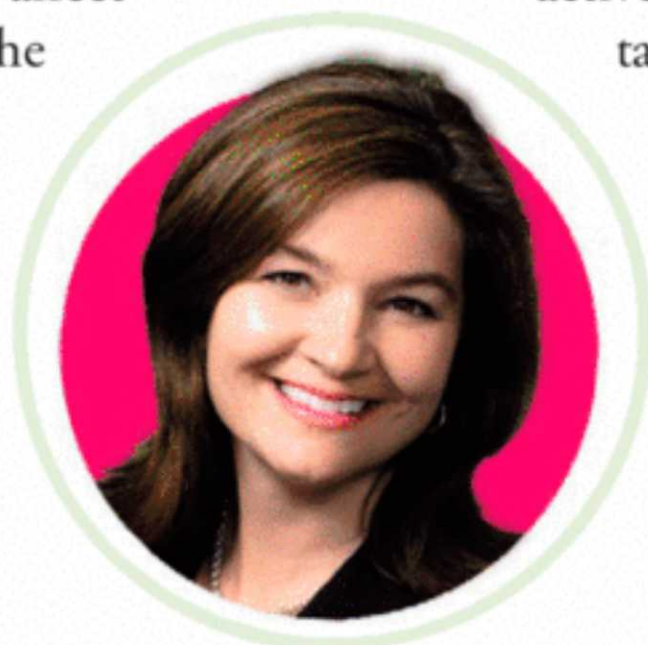
Through it all — meeting superintendents’ needs, developing new modes of action and introducing environmentally sound products — chemical companies realize they must be efficient in the process so as to not waste time and money.

Bucci says manufacturers have become efficient during the active ingredient screening process. For instance, manufacturers screen early for an active ingredient’s ecotoxicity issues.

“We do that now to make sure we don’t spend a lot of time and money on an active ingredient that may never pass through EPA later,” she says.

Silcox says DuPont takes a two-pronged approach to develop a new compound, focusing on performance and toxicology. The proficient approach enables the company to develop a compound and bring it to market faster, which means the product will have a longer shelf life under patent.

That could equal more revenue. And additional revenue allows companies to keep on keeping on, even through the most tumultuous of times. ■



Toni Bucci says BASF is researching products outside traditional pesticides.