Michael Ross, superintendent at Due Process Stable in Old Bridge, N.J., has been using the Autocontrol Spray System for about a year now. Like Jacobsen, he'll never look at a sprayer the same way again.

"I can see it being the wave of the future, quite frankly. It's a question of time," he says. "Compare it to your everyday sprayer. It does it all itself. You can use auto-steer in your fairways."

Nu Tech posted a video on YouTube to demonstrate auto-steer in action (see page 9, "Around the Web," for the link.) In the video a sprayer, with no one touching the steering wheel, easily glides inches past a person standing on an invisible GPS-designated boundary. And then the sprayer turns around and does it again for good measure.

All that's missing from the trick is a blindfold, a lit cigarette and a bullwhip.

"It's a great technology. It's very precise. You can do multiple different boundaries," says Ross. "The machine is doing all the work, it's tracking everything for you. You can watch it on the screen — if a nozzle goes over an area that's already been sprayed, the nozzle goes off. You can reduce your pesticide use, which is a key thing today."

Leap of faith

Both Ross and Jacobsen consider themselves somewhat early adopters of new technologies. But typically they do like to see some trial and error in the field before they buy in. That wasn't the case with these new GPS-minded sprayers.

"The benefit was just too good not to take that leap of faith and trust that we'll get the support to get it done right," Jacobsen says.

It was out of frustration that led Jacobsen to try the new technology. It was the middle of the summer of 2010 – a tough summer for many – when Jacobsen was fighting some *Poa* in his fairways.

"I went out and sprayed some iron, some fertilizer to try to perk everything up. I got a bad result from the spray. It was a little hot products in the tank, we had some skips, we had some overlap, we had some areas where my operator stopped and burned some turf







"It's the future... the technology is here," Marc Thigpen, owner of Nu Tech, says. "We're trying to build products supporting superintendents with technology."

Bill Irving of Lawrence (Kan.) Country Club gets an in-depth explanation of the features on Smithco's Star Command system from Emil Miller at last year's Golfdom Summit. Continued from page 21

convenience for everything we have to do."

The rolling of the dice worked out for Ross as well.

"This was a prototype. Anything that's new, you have to keep your eye out for kinks, and we did that," Ross says. "With anything new you have to buy into the technology, you have to be comfortable with the technology, and then you have to believe."

The future

Two men thankful for those superintendents willing to take a leap of faith on new turf tech are Emil Miller, marketing manager at Smithco, and Marc Thigpen, owner of Nu Tech.

"It's the future... the technology is here," Thigpen says. "We're trying to build products supporting superintendents with technology."

Even though the technology is advanced, one of the best things about the new systems is something of an old school concern: paperwork.

"Superintendents like that they have some reportability, for record keeping. Every job they do can be printed and kept in their records," Miller says. "If a superintendent has his spray tech put 300 gallons of chemistry on the golf course, and they ask him where it is, he can say, 'It's on the other side of the door."

Both Miller and Thigpen agree, and Jacob-

sen and Ross echo, that these new technologies are not too difficult to train employees to operate.

"The training component is like anything new, it takes a little time to learn the programming," Ross says. "Each operator learns at a different pace. Some people require more time, other people pick it up more quickly."

And the payoff is accuracy down to the centimeter.

"We spray a 100-foot swath at 20 mph on the farm. (Superintendents) spray 18-feet and have a lot of issues with overlap. It took a little bit of finessing, but basically we're controlling individual tips to a sub-centimeter accuracy," says Thigpen. "We can spray only what we want to spray. Each tip goes off on its own, it's all computer controlled."

Sprayers, it turns out, have come a long way from Carl Spackler's days.

"I use a slide in my presentation from *Caddyshack*. At the end of the movie, when Bill Murray is blowing stuff up, there's an old three-wheel Cushman with a big round Smithco sprayer on the back. Pretty much just a little rope with a ratchet valve to turn it on and off," Miller says. "That was filmed in 1979. Forty years later we have GPS control, individual tip on/off, different speeds, different rates without changing pressure... it's light years from where we were, even 10 years ago."



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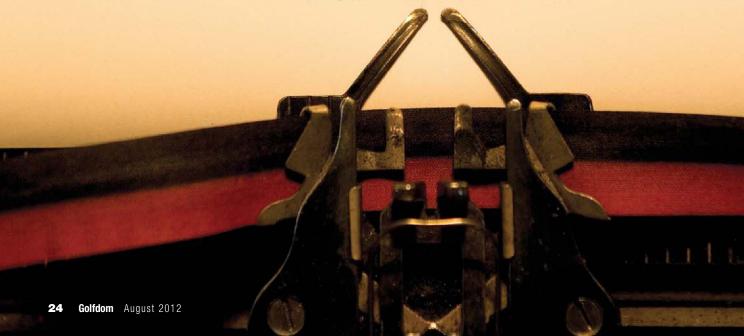
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GARY GROW-IN AND THE GRIGG BROS.



How two Oregon farm boys unintentionally started a successful international fertilizer business.

BY JOHN WALSH



Opposite: Gary Grigg with professional golfer Bruce Devlin and golf course architect Robert Von Hagge at one of Gary's early grow-ins.



"AT THE TIME, in Idaho, you could drive at 14," says Mark Grigg, president of Grigg Bros.

It was at that young age that Mark and Gary Grigg started working in the agriculture business in Oregon. Their father owned Grigg Brothers Fruit and Vegetables, which became Ore-Ida Foods. Gary earned his undergraduate degree in agriculture at Utah State University; and Mark, who's eight years younger than Gary, attended Utah State, too.

"I had no intention of working outside the family business," says Gary, the vice president and agronomist of the company, adding he intended to return to Oregon after finishing his master's degree at Michigan State University.

Three months before he earned his degree, his father sold the family business to H.J. Heinz.

"I wasn't sure where to go," Gary says. "I hung out with the turf students at MSU, which is how I got to know Jim Beard, Ph.D., and Bruce Matthews.

Bruce asked me to grow-in a golf course, and I told him I didn't know anything about turf. He said, 'It can't be any harder than growing potatoes.'"

Gary was a golf course superintendent for 32 years. He spent 16 years with Houston-based Kindred Watts & Associates during the early days of golf course management companies. Kindred, which owned and managed golf courses, went under in 1988.

"They used to call me 'Gary Grow-In," he says, referring to the numerous courses he grew-in during the 1980s.

Gary moved on and spent time at Naples National Golf Club in Florida; Ventana Canyon Golf & Racquet Club in Tucson, Ariz.; and Shadow Glen in Olathe, Kan. He wound up his superintendent career at Royal Poinciana in Florida, where he oversaw a complete renovation of the golf course.

While Gary was making his mark as a superintendent, younger brother Mark came out of school selling fertilizers in Idaho. It was there he met a biochemist named Gene Miller, Ph.D. Miller, an 86-year-old ex-professor, developed fertilizer technology and was talking to Mark about marketing it to the agriculture segment.

Tom Wieskopf, Gary Grigg and Tom Watson take a break from working on Shadow Glen GC in this shot from 1989.

"I was at Naples at the time," Gary says. "Mark sent me the samples. We liked them so much, Mark approached Gene and told him we were interested in licensing his technology in the turf industry."

Early days of Grigg Bros.

The Grigg Bros. company started in 1995, and for the first five years, Mark was the whole company. Then he brought in Gary's son and others they knew well. The company started selling foliar products only. To date, the company doesn't use Miller's technology in anything other than its foliar products.

"They say it takes five years for a business to take off. Sales started to climb. I told Gary, I think it's time for you to come on board," Mark says of when he convinced his brother to leave behind the superintendent profession. "Sales started exploding. We needed to add a guy for every million."

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Grigg Bros.

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"I never dreamed the company would take off like it did. I thought it would supplement my career as a superintendent," Gary recalls. "Mark talked me into leaving the profession and starting Grigg Bros. It wasn't an easy decision because I was a highly paid superintendent. It was a risk."

The Griggs started by selling three products, including their biggest-selling phosphite product, PK Plus.

"It was the first one in the market 12 years ago. Now there are 15 products," Gary says.

In the early days, the Griggs sold stock to raise money. They turned to friends such as former superintendent Bruce Williams, who's now a part-owner of the company. Williams, who invested in the company around 1997, has been on the company's board for 15 years.

"I liked the product line and the partners, so I invested in the stock," says Williams, who's now a consulting agronomist. "Usage of the product line always was based on quality and value."

The Grigg brothers complement each other — Mark has business skills, and Gary has agronomic skills. Mark, who once bought a music store for \$1 and managed its debt, is an entrepreneur.

Today, Grigg Bros. has 11 full-time employees, including Gary's son Jared, who is the company's director of information and communication, and Mark's son Justin, who is the director of operations.

The Griggs' father, who had only an eighth-grade education, was an honest man who operated a credible business. His ways rubbed off on his sons.

"We wanted to carry that honesty forward with our business," Gary says.

As such, four principles guide the brothers' business:

- 1. Have quality products.
- **2. Get involved in research.** "Any time you don't have data to back up your product, it's just marketing and unsubstantiated claims," Gary says.



Mark (left) and Gary Grigg at the 2012 Golf Industry Show in Las Vegas. "We started this business to make superintendents' jobs easier," Mark says.

- **3.** Hire a good staff. Company agronomists include: Matt Nelson, formerly with the USGA; Gordon Kauffman, Ph.D.; Mike Steve; Steve Sweet; and Tyler Warner.
- **4**. Be environmentally aware. Most of the company's products are organic, partially or all.

"BoardRoom magazine ranked us in their Excellence in Achievement Awards," Gary says. "We're getting the recognition based on our four principles."

International expansion

The company has been growing and started selling overseas — New Zealand, the U.K., Germany, Australia, Korea and China — a few years ago. Mark talked to independent distributors to get them on board. The company now has 60 of them. The company's international business segment is its fastest growing – it's 15 percent of its revenue.

"Superintendents overseas traditionally don't use foliar products," Gary says. "We have everything covered in the U.S., distributionwise. Now we're looking more internationally. We're heavy in Canada, which is a good market for us. One of our top 10 distributors is Irish.

Ireland is a market where we have the biggest penetration overseas."

The company, which has about 20 liquid products and about 35 total, is looking to improve older products as opposed to launching new ones. Grigg Bros. will soon market a pigment for superintendents who can't overseed warmseason turf.

"I have hundreds of friends in the business who've tried our products – that's how we grew the company," Gary says.

With foliar products, Grigg Bros. promotes small rates because a healthy plant requires less fungicide. With a healthy plant, superintendents can cut fungicide rates considerably.

"Chemical companies are starting to add their own type of foliar products in their mix," Gary says. "Tell us they're not looking at our research."

The fact that a significant amount of research has been done on the company's products means a lot to superintendents.

"Grigg Bros. uses peer-reviewed research to support their claims rather than fancy advertising," Williams says. "So doing business with a company that backs up their products and is well trusted in the industry was important to me for my choice of vendors."

"You have to work hard to be successful," Mark says. "Honesty and integrity are the most important things. We prove everything we do."

Contributing editor John Walsh lives in Cleveland.



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THINKING OUTSIDE THE TERNX

TO ENSURE THE FUTURE OF GOLF, INDUSTRY PROFESSIONALS ARE TAKING CREATIVE MEASURES TO GROW THE GAME. BY KATY IBSEN

There is no way around it – golf has suffered.

In recent years golf has been put under a microscope for its loss of players and course closures. According to the National Golf Foundation, 107 golf courses closed in 2010, and 157.5 in 2011. Not to mention, during those two years, participation dropped by 1 million.

As the economy emerges from the recession, architects, superintendents, golf professionals and industry insiders are discussing ways that golf can become attractive again.

Rick Phelps, golf course architect and president of the American Society of Golf Course Architects (ASGCA), weighs in on the subject and why "out-of-the-box" thinking might be a means to an end in growing the game. The Colorado-based architect and owner of Phelps Golf Design considers the game's demise a perfect storm.

"It's not just that we're losing players because of this or that or another thing," he says. "It's that the supply met up with the demand at the exact same time that the economy went in the tank, at the exact same time that golf had run its course as the popular sport. That all propped it up a little bit falsely in terms of what was really sustainable as far as numbers and real golfers."

Despite that fact, Phelps believes that the game can be saved without being reinvented. As the ASGCA supports the PGA and the USGA, it says its worthy initiatives, such as Get Golf Ready and Play Golf America, ultimately will help

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"We're trying to offer things that make (golf) either A) more of a family activity or B) a shorter activity where you can get in and not miss the daily fun of the family."

—Robert Carey, superintendent, Spring Brook CC, Morristown, N.J.





Growing the Game

Continued from page 28 the game survive.

Highlighting the PGA's Golf 2.0 program, Phelps says, "It involves basically going back out and attracting former golfers back into the game, through either lessons or discounted programs. It involves bringing new players into the game through junior golf programs, but also adult new golfer programs.

"As importantly," Phelps continues, "it's looking at the facilities themselves. This is where they are working with us as architects, is looking at the facility and saying, 'OK, what can we do with our facility to make it less intimidating?"

Redesign for little to nothing

Phelps, whose designs include the Broadlands in Broomfield, Colo.; Devil's Thumb in Delta, Colo.; and Panther Creek CC in Springfield, Ill., explains that with players yearning for an end to the recession, now is the time for courses to plan. And yes, he says, they can afford an architect.

Architects can help courses and management assess their available resources, whether they be physical or financial. It's about identifying what can be done for little or no cost, Phelps says. "With a lot of courses you don't have to build anything, you just have to restructure how the course is operated," he adds.

Creating room for more executive-length or 3-hole courses would attract new golfers to the game, Phelps stresses. "We're sort of borrowing from the ski industry and using the term 'bunny slopes,' until we come up with something better," he says.

The shorter courses would enable beginners to acclimate to the game before playing a full round. Likewise, they would allow for different rules of play, making golf fun while inspiring players to learn the game's rules and format.

Osgood Golf Course in Fargo, N.D. has a short course. And it has seen participation grow every year since its opening in 2005. Head professional Lisa Schwinden attributes Osgood's growth to a few different things, including the "ABC" round. The



"With a lot of courses you don't have to build anything, you just have to restructure how the course is operated."

—Rick Phelps, president of the American Society of Golf Course Architects, on how courses need to change their mindset on traditional golf



three-hole practice course complements the club's regular nine-hole executive course.

The three-holer, which costs \$5 to play, features two par 3s and a par 4. It has five tee boxes, some of which are for junior players who play from shorter distances.

"From that we get a ton of people out there, in really all different levels, not just beginners, but people who also want to play a quick three holes and that's it," Schwinden says.

The three-hole course is fast; a round can be played in 30 to 40 minutes and is ideal for beginners and juniors with a short attention span. Most importantly, the positive experience on the three-holer brings players back for Osgood's nine-hole course.

Private sector

Robert Carey, golf course superintendent at Spring Brook Country Club in Morristown, N.J., also has seen a desire for a shorter golfing experience. After finding members playing only 6 holes, with both the 6th and the 9th holes ending at the clubhouse, the club decided to actually promote the idea. As Carey explains, players don't have to be out there all day; they can be out there for an hour and 15 minutes and get 6 holes in.

"No longer is it my mom's generation where the kids were picked up and taken to practice.... It's more of a team effort now. And that's why we're trying to offer things that make it either A) more of a family activity or B) a shorter activity where you can get in and not miss the daily fun of the family," says Carey.

His club, however, sees another side to keeping players in the game, and it has little to do with the design of the course.

"We worry about membership numbers." We do our things to keep our members," he says of the private club. Instead of altering or adding to the course to make it easier for new and returning players, Spring Brook is finding ways to make the game more accessible.

The club has adapted to the new golfer lifestyle. It restructured membership dues and membership classifications, allowing more players to invest and play among their peers. The club offers 6:30 a.m. tee times for