

Smart SPRAY

New innovation in sprayer technology has superintendents saving on chemicals, labor and time. BY SETH JONES

There was a time when Kyle Jacobsen could own an everyday sprayer. Those days are long gone.

“I am at a point that I will never own a sprayer that sprays the old way,” says the superintendent of the 36-hole Twin Orchard Country Club in Lake Zurich, Ill. “If I ever change to a different course, this will be the first thing on my capital requests list. Any sprayer I buy in the future will have this technology. I’ll never go back to spraying the old way — it’s phenomenal how much better we are now.”

Yes, there is a new and an old way to spray.

The new smarter way to spray centers on GPS technology and individual tip control. These advanced spraying systems can now apply chemicals more accurately, with no skips or overlaps — resulting in less product used, a shorter application time and eliminated operator error — all while producing in-depth reports on applications.

“I went from (using) three spray rigs spraying at 5 mph, to now I spray my fairways with two spray rigs at 9.2 mph. That’s pedal to the floor — if my sprayer would go 11 mph, I would spray at 11 mph. And the accuracy is 10 times better if not 100 times better than the previous way,” Jacobsen says. “I actually spend more time mixing my sprayers right now than I do spraying out a tank.”

Sprayers step up

Kyle Jacobsen was an earlier adopter of Smithco’s Star Command system. The system is a collaboration of technologies that uncouples the usual connection of speed, rate, pressure and tip size to allow a tenfold rate range at a wider vehicle speed range.

Another system that offers similar benefits is the Autocontrol Spray System from Turf Geeks, a division of Nu Tech. The system utilizes GPS-guided precision and features auto-steer and individual nozzle control to optimize spray coverage by eliminating overlap and spray into non-target areas.

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



because he slowed down without turning the booms off fast enough," Jacobsen recalls. "I had all these mistakes on an application – I was trying to do good to the grass and it actually hurt me even worse than doing nothing would have done. It highlighted to me how much of a lack of control I had in my application process, especially with an inexperienced operator."

By taking the leap of faith on what was then a mostly untested new sprayer, Jacobsen reduced his chemistry usage by five to six acres of chemical per application.

"I haven't heard any new technologies that make as big of an impact (on the industry) as this. This impacted my labor budget with savings, my chemical and fertilizer budget with savings, and it's improving my time and access to the course," Jacobsen says. "I have 36 holes, so when I'm going out I'm spraying 50 acres of fairway with two sprayers and I can do it in a window from start to lunch. I can get all 36 holes done ahead of play in a day instead of splitting into two days. It's a tremendous

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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.

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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-foot 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.” ■