

SPRAYERS

BY MARGARET HEPP

# A numbers game

Director of golf course maintenance keeps two different courses in line in Virginia

At Wintergreen Resort, Fred Biggers oversees two golf courses 13 miles apart – a total of 45 holes maintained by 37 peak-season staff. Factor in two completely different climatic zones and a separate routine at each course, and Biggers is nothing short of a mathematician.

Wintergreen is a membership-owned, four-season resort in the Blue Ridge Mountains of Virginia that features golf year-round on two courses. Devil's Knob, the highest course in Va. (a 3,850-foot elevation), is an 18-hole

course on the mountain for which it's named. Stony Creek is a 27-hole course in the valley below. In addition to golf, Wintergreen features ski slopes, a tennis facility, a spa and several thousand condos at the top of the mountain, but Biggers has little time for leisure with his busy schedule.

The vast differences in climate between Devil's Knob and Stony Creek – the former is open April through November and rarely gets warmer than 80 degrees, while the latter is a product of its native surroundings – keeps

Biggers on his toes when it comes to maintaining turf. Routine maintenance can be quite a production, but Biggers knew what he was getting into when he arrived at the resort nine years ago.

"I took over for a pretty sharp, certified superintendent," he says. "So I had a pretty good idea going in. I knew Devil's Knob is more like a northern course – a lot of *Poa annua*, a lot of bentgrass. The climate in the valley is similar to Richmond, Va."

Biggers has a golf course superintendent and assistants at both courses, and works closely with his mechanical staff – two separate crews.

As part of Wintergreen's equipment fleet, the resort owns a small fleet of sprayers:

- A Toro 150-gallon greens sprayer at each golf course.
- A Toro 1150, purchased in 1999, used at Devil's Knob.
- A Toro 1250, purchased in 2005, used at Stony Creek for spraying greens and tees.
- A Toro 5500 300-gallon sprayer for spraying fairways.
- An Airtec tractor sprayer, which cost less than \$20,000 when it was purchased six or seven years ago.



Fred Biggers mainly uses a tractor sprayer to apply fungicides on green surrounds and fairways. Photo: Airtec

- A 100-gallon Toro sprayer with a hand-boom for herbicides.
- A 20-year-old John Deere sprayer similar to the Toro 1150.

“We mainly use the Airtec for spraying fungicides on green surrounds and fairways,” Biggers says. “It’s fast and easy, and we’re able to use less product. We cut our rates when we use the Airtec. I have a lot of experience with the Airtec, probably as much as anybody in the U.S., because we’ve used it for five or six years. We can use as much as half the rate and get the two weeks of control we want when we spray with the Airtec.”

The crews don’t spray the fairways as much as they used to partly because Biggers removed bentgrass from nine holes and replaced it with zoysiagrass.

Biggers is fascinated by the technology behind his Airtec sprayer, which deploys electrostatically charged particles into the air at high



The Wintergreen crews don’t spray the fairways as much as they used to partly because zoysiagrass replaced bentgrass on nine holes. Photo: Airtec

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## SPRAYERS

Fred Biggers has a fairly old fleet of equipment, but he credits each machine's longevity to his talented mechanic team. They keep extra pumps, parts, nozzles and fittings around to repair equipment easily. Photo: Airtec

volume and high speed.

"It's unbelievable coverage," he says. "We've had a lot of success with the Airtec. The sprayer paid for itself in two years. I have one of the early ones, and we had to mount it on a pretty large tractor, but it does a great job with fungicide applications."

While Biggers is partial to his Airtec, he prefers to use the Toro 5500 on the fairways. It's much more windproof because of shielded booms.

During the summer, the crew controls weeds monthly with hand sprayers to target areas that can't be reached with the large boom. One application lasts three months and saves labor costs.

The John Deere sprayer also has its own unique purpose: It comes in handy for herbicide applications in tight or sloped areas.

"It stays on the slopes a little bit better because it's lighter," Biggers says. "We've kept the booms on the John Deere. We put a whole new engine on that, a whole new muffler and new controls. It's probably on its fifth



or sixth pump, but the frame doesn't wear out, and the tank doesn't wear out. It operates well."

Biggers has a fairly old fleet of equipment, but he credits each machine's longevity to his talented mechanic team.

"I've got wonderful mechanics," Biggers says. "We don't think anything of replacing an engine or rebuilding a pump. Everything here works, and works well. We keep extra pumps, parts, nozzles and fittings around so we can fix something without too much drama."

**"If we can do anything to cut costs, we're going to do it. And if we contemplate another sprayer, we're going to look all around." – Fred Biggers**

Biggers has been contemplating a new sprayer to replace his Toro 1150, but says that at this point, he might just rebuild the booms (all of Biggers' sprayers have electric booms and T-jet nozzles). The golf courses have a fairly hefty maintenance budget of \$1,575,000 – but considering \$1,025,000 is allocated to Stony Creek and \$550,000 is allocated to Devil's Knob, it's understandable Biggers would rather repair his working machines than shell out the cash for new ones.

"If we can do anything to cut costs, we're going to do it," he says. "And if we contemplate another sprayer, we're going to look all around. We use our sprayers to spray many different things. We spray insecticides and wetting agents one day, and the next day, we spray tees with wetting agents, and the next day, fungicides."

Even with so many operations under way, Biggers manages to keep it all straight.

"It's kind of organizational, but I've been running multiple courses and clubs and resort-type operations since 1988, so it's kind of second nature to me," he says. "It's what I do. I wouldn't know what to do if I went to 18 holes. I guess I'd have to get even more detail-oriented, but you just get used to doing a bunch of different things at once."

And when all else fails, Biggers reminds others you can't always win. "Sometimes you just prevent the worst loss," he says. **GCI**

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# Spray it right

Opening his fifth golf course, Danny Gwyn relies on two intelligent machines – a turf sprayer and the human brain

Danny Gwyn speaks about The Club at Twelve Oaks, just outside Raleigh, N.C., with an easy confidence, but it's not the course's longstanding tradition that gives Gwyn his self-assurance. Twelve Oaks is a new, 18-hole private golf club that opened this month. But Gwyn has 25 years in the industry under his belt. Currently, he's the course's superintendent and regional director of agronomy for ClubCorp, the company that manages Twelve Oaks. In true veteran fashion, he's about to deliver the club's inaugural golf season without a hitch.

There's a lot of pressure that's part of the grow-in process at a new course, but Gwyn kept a cool head when it was time to bring in equipment and supplies. For his sprayers, he went straight to Smith Turf and Irrigation, the Toro distributor that has served him for more than 20 years.

In June 2007, Gwyn purchased a four-year lease on two Toro sprayers – a Multi Pro 5700D for large turf areas and a Multi Pro 1250, which he uses predominately for greens. The leases cost about \$35,000 and \$25,000 respectively, and were part of a \$950,000 new equipment purchase to supply the course and crew.

The decision to lease was based on the developers' needs, not ClubCorp's needs, Gwyn says.

"It spreads out capital dollars further," he says.

The decision to invest in Toro was based on loyalty and past experience.

"In this region of the country, our Toro distributor is solid," Gwyn says. "I've been in the business for 25 years, and it seems like it's been this way for the most part. They're consistent."

With 15 golf courses under his direction, consistency is a crucial element of Gwyn's life and practice as a superintendent. His grow-in was regulated carefully.

In June 2007, Danny Gwyn purchased a four-year lease on two Toro sprayers – a Multi Pro 5700D and a Multi Pro 1250 (pictured). Photo: Toro



"We used the 5700 once a week for various growth regulation applications," he says. "A lot of herbicide sprays were conducted during the grow-in. The 1250 was used at least once a week."

Gwyn anticipates he'll continue to use his 1250 greens sprayer weekly during the rest of the year, but he'll use his 5700 less frequently, perhaps once every two weeks.

"Once we get a more established turf here, we'll probably be doing more growth regulations of the lower-cut grass than herbicide sprays with the 5700," he says. "We'll continue to spray herbicides, but growth regulation will be a big part of our practice."

Gwyn's crew sprayed three fungicide applications in the spring, about six months after the greens were established. Last fall, they sprayed for fall army worms. No insecticides have been applied in 2008. The 5700 was used for both the fungicide and insecticide applications.

The 5700 and 1250 are equipped with T-jet nozzles, each with a triple adapter on the nozzle station. With the help of a \$900,000 maintenance budget, Gwyn and his crew are prepared to troubleshoot any sprayer problems as they arise, but the equipment is so new they have yet to run into any malfunctions.

When the four-year leases on the sprayers end, Gwyn predicts he'll stay with Toro for his next sprayers.

"I've been a customer for 20 years, and I've been in the business for 25," he says. "Customer service, from my standpoint, is one of the most critical things when deciding on a piece of equipment. Obviously we want the best equipment, but we also want somebody to stand behind it. Toro, as well as our distributor, has always done an exceptional job in servicing its customers."

In addition to the Toro sprayers, Gwyn also uses four Shindaiwa SP415 backpack sprayers, as well as several hand sprayers from local hardware stores. During the grow-in process, Gwyn's team used the Shindaiwa sprayers frequently.

"If we have isolated areas for weed control, we'll actually spot spray," he says. "It's labor intensive, but it works well for us."

Even as Gwyn considers the future, he also takes time to appreciate – and apply – the skills he's learned along the way.

"People rely too much on the sprayers' computer technology to make some basic calibration decisions," he says. "To me, the old-fashioned way of calibrating a sprayer is still the most accurate and dependable. The computerized systems are good, but they're not foolproof. That's the biggest thing I tend to see."

Both Gwyn's sprayers have calibration systems, but, as with his course, he takes nothing for granted. He and his crew constantly double-check the computerized calibration against their own basic calibration techniques. But Gwyn will have to wait until he gets through his first season at Twelve Oaks to find out how well his team measured up. **GCI**