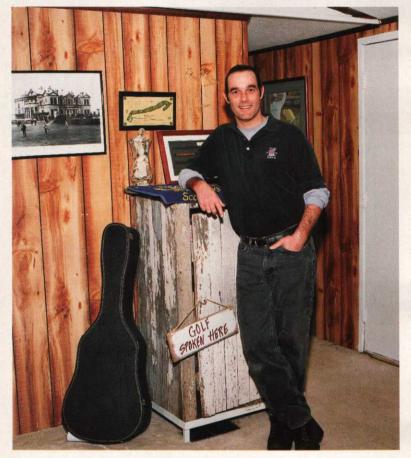


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"As it turned out, it was great," notes Livingston, adding that he had no problems with members bothering him on his days off. "There were a lot more advantages than disadvantages. If I had to go to the course at an odd time, it was a one-minute drive."



Deep down, I knew that living on the course would probably be a good thing, but I was worried about how it was possible to separate work time from home time.

Rod Johnson, certified superintendent of Pine Hills Country Club in Sheboygan, Wis., has lived on the grounds for 23 years. He says it's beneficial for himself and his employer, but he does feel like he's on constant duty. "Living on the course does make me the 24/7 go-to guy."

While he likes living on the course, Johnson does wonder where he will live when he retires, though.

Ken Williams, certified superintendent at the Stanford University Golf Course in Palo Alto, Calif., chimes in with the good, bad and ugly of living in "provided housing."

Williams warns that one needs to be careful in the negotiation stages when there is housing involved, as a future employer may feel like it doesn't need to pay as much as other

courses since it's providing a place to live.

"While 'free rent' sounds great, my reduced salary compounded over my career will not net me nearly as much as my peers," Williams says.

And what of the house itself? Williams lives in a circa 1877 farmhouse in need of improvements that aren't in the capital budget, so any updates needed to keep his family comfortable have to come out of his pocket.

It's not all bad, though. "I do like the convenience of being right on the course as running home is easy from work, and running back into the office is easy from home," he says.

#### **Common themes**

Still in thinking and deciding mode, I searched my peers' responses for a common thread — some sort of positive that would sway my decision. Being a single parent of two young daughters, I couldn't help but wonder how living on a golf course would affect them.

Deep down I knew that living on the course would probably be a good thing, but I was worried about how it was possible to separate work time from home time. Then finally, the common thread I was looking for wove its way through the responses and into my decision. It was: Make the time for your family no matter where you are.

Kevin Hicks, superintendent of Coeur d'Alene (Idaho) Golf Resort, says he has fond memories of a previous assignment at a high-end club in Arizona — and most involve his son.

"We lived on site for seven years and have some great memories of taking our son out on the golf course and looking at nature, watching the dog run around and seeing more than our share of beautiful sunsets," he says. "If I ever have the opportunity again, I'll take it in a heartbeat since we all cherish those peaceful night tours around our property."

Matt Strader, superintendent of Penn National Golf Club, shared his flashback of his five-year stint at Huntingdon Valley Country Club outside of Philadelphia, with his wife and four sons.

"I must say that it was an enjoyable experience for all of us," he says. "The house was secluded from the rest of the course, yet right next to the maintenance facility. We had lots of wildlife to enjoy during evening walks or just sitting on the front porch.

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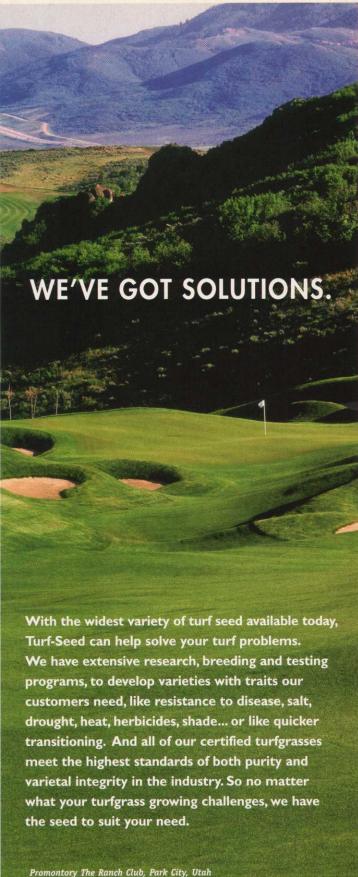
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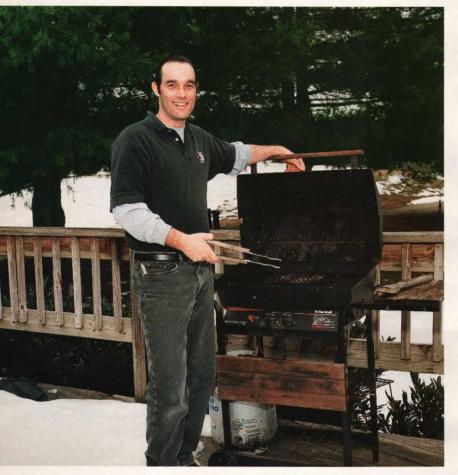
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"It was not a burden at all," Strader adds. "Sure there was an occasional fire to put out here or there, but it was a well-run course, and most of the time I had at least two of the kids in tow. They really liked to ride around the course in the evening."



My original inclination had been to accept the offer of living on the course because of the opportunity to have a 200-acre finely manicured 'yard' at my disposal.

Gordon Seliga, certified superintendent of Lake View Country Club in North East, Pa., likes to take his 5-year-old son on evening rides on the course. "Of course he brings his special putter that the assistant pro cut to length for him," Seliga says. "He enjoys it, and I'm able to plan for the next day or adjust the watering schedule based on my observations that evening."

Seliga has certainly had his share of phone calls when things go wrong - a member forgot his shoes in the pro shop or the range picker ran out of gas. But he says most of the inconveniences have been significantly reduced through good communication with other department heads.

Seliga says living on the golf course allows him to do more for the golf course and spend more time at home. "During the summer months, a superintendent's job is demanding and requires long hours," he says. "I can't imagine having to drive several miles back and forth to work without significant disruption to the time you spend with your family."

Robert Mitchell, now retired after spending 25 years at The Greenbrier Sporting Club in White Sulphur Springs, W.Va., began his career when he worked and lived at a public course operated by the Alton (Ill.) Recreation Department. Working long hours with a minimal crew and tiny budget, he still managed to finish school and start a family.

"My wife and I married, and we were very happy being close to the action," he says. "We did not have a car, and I drove the golf course's Worthington tractor the two miles to school for a one-hour course three days a week. I didn't make much money, but we were blissfully happy. I had two children while at the job."

Mitchell and his wife Dorcas had their third child while at the Sunset Country Club in St. Louis (Mo.) After two years at the Portage Country Club in Akron, Ohio, where the family lived off site, Mitchell went to The Greenbrier, accepting the cottage on the property. "It was extremely comfortable. It was great."

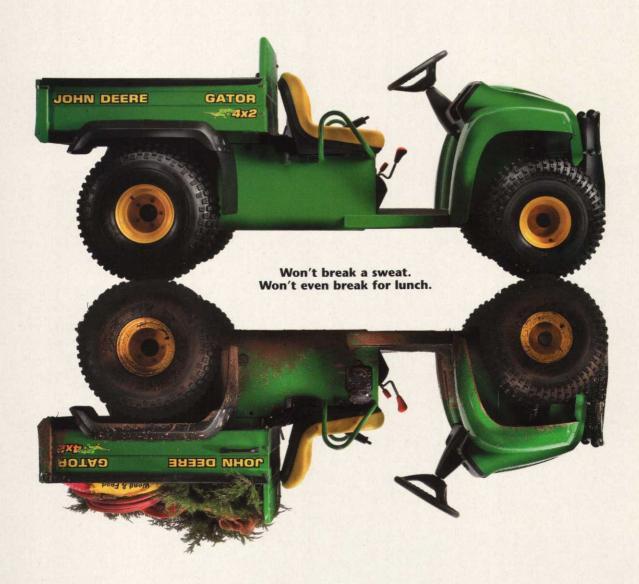
So now the scale was tipped heavily toward making the move. My original inclination had been to accept the offer of living on the course because of the opportunity to have a 200-acre finely manicured "yard" at my disposal. My kids were thrilled at the idea, too, but I had worried a little about the dangers of flying golf balls.

But thanks to my fellow keepers of the green, those worries are gone. The course owner and members are very respectful of my privacy, my 10-year-old is now an ace golf car operator and my 5-year-old loves roller-blading on the cart paths.

Like Tim Powers, certified superintendent of Crystal Springs Golf Course in Burlingame, Calif., says of living on the course — it's a wildlife refuge. The blue heron, wild turkeys and white-tailed deer are my new neighbors.

For me, my family and my current life situation, it was a good choice. And I'm glad I gave it some thought beforehand.

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# It Takes Two to Tank Mix

Here's the latest research and some information on combinations that work - and what to look for when you're considering a new one

BY FRANK ANDORKA, MANAGING EDITOR

### ssue

Superintendents are looking for more cost-effective ways to battle multiple springtime diseases without adding to labor costs or damaging the environment.

### Solution

Tank mixing fungicides, with proper oversight and precautions, offers a way to deal with this often challenging conundrum.

ou've all done it - mixing two chemicals to broaden the number of springtime diseases you can fight with one application. You match compatible chemicals, put them in a tank (maybe with a biological agent or fertilizer to give it some added kick) and test it on an inconspicuous spot on the course. If it works, you're ready to spray.

In the industry, these concoctions are known as tank mixes (or, less charitably in some circles, "witches' brews"). Experts say tank mixing is a useful way of treating more than one disease with fewer chemicals, thereby lessening the environmental impact of the two fungicides separately.

But the practice is not without potential drawbacks, and experts say superintendents should be cautious when they combine chemicals. Here are some ideas about why you

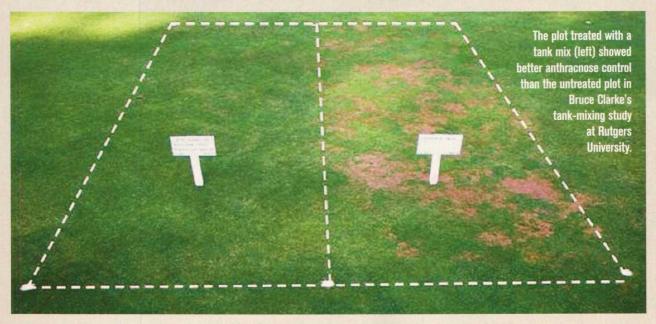
should tank mix, what works and what precautions you should take before putting two chemicals together.

#### Why tank mix?

Jim Skorulski, senior agronomist for the USGA Green Section's Northeast Region, says tank mixing is a routine practice in the industry. He says it's usually done to broaden the spectrum of disease control, especially if one fungicide doesn't control all the pathogens the superintendent needs to control. Superintendents will often add an additional fungicide in the mix to protect against the secondary pathogen.

Skorulski also adds that broad-spectrum contact fungicides are often combined with more narrow, targeted penetrant products because superintendents want to reduce or

Continued on page 108





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"How aggressively someone tank mixes depends almost completely on his personality."

JIM LOKE, SUPERINTENDENT BENT CREEK COUNTRY CLUB Continued from page 106 delay the development of disease-resistant pathogens.

"You'll also see superintendents add a fertilizer in the mix as well," Skorulski says. "They'll put any number of things together that they think will enhance their turf."

Jim Loke, certified superintendent of Bent Creek Country Club in Lancaster, Pa., says each superintendent tank mixes for different reasons, but the primary reason is to get a broad-spectrum effect.

"How aggressively someone tank mixes depends almost completely on his personality," Loke says. "But what I try to accomplish is to make sure I've got a mixture that will take care of more than one disease at a time."

### What is working?

USGA agronomist Darin Bevard says superintendents in the mid-Atlantic region are mixing chemicals for a variety of diseases that hit in the spring, including anthracnose and summer patch. The most popular fungicide combination for these springtime diseases is sterol inhibitors (SI) with contact fungicides.

"When summer patch and anthracnose are the concerns, we see combined SI/contact fungicide applications early in the spring, with additional applications between 21 days to 28 days later," Bevard says. "Not only do they work well on the two targeted diseases, but they seem to deal preventatively with other problems like dollar spot and leaf spot."

Bevard says the treatments usually begin in mid-April and are completed in late May or early June. Loke says he swears by the SI/contact combination to control anthracnose on a preventative basis, and he often adds a pythium-control fungicide to the mix as well.

Karl Danneberger, professor of turfgrass science at The Ohio State University, says that spraying tank-mixed combinations of fungicides that each work individually on anthracnose will increase the efficacy of both.

Bruce Clarke, vice chairman of the Department of Plant Biology and Pathology at Rutgers University, hosted a two-year study on the efficacy of tank-mixing and rotational fungicide programs.

"What tank-mixing allows you to do is use lower rates of both chemicals while getting excellent control of several diseases at once," Clarke says.

Clarke says tank mixing also staves off resistance problems more effectively, particularly when the combined fungicides have two different modes of action. One somewhat surprising study finding was that an increase in nitrogen fertilization, combined with the fungicide application, led to a 30-percent reduction in anthracnose. "We didn't tank mix fertilizers with the fungicides because we didn't want to muddy the results, but you probably could do so quite easily," Clarke says.

Loke says he adds a humate product to his chemical applications because the combination seems to enhance the effects of the chemicals.

#### What to watch

Despite its popularity and success, tank mixing doesn't work in all cases. Danneberger says superintendents need to remember that not all chemicals are compatible.

"You should always check the label before



you tank mix anything," Danneberger says. "Incompatibility may be an issue. If you have any doubts about what you're going to do, check with the manufacturer first."

Loke says he doesn't just take the manufacturer's word for whether two chemicals are compatible. He performs a simple jar test each time he tries a tank mix. Loke takes the chemicals he's considering putting together and puts them into a 2-gallon jug, being careful to keep the proportions equal to what he will be putting on the course. If the two chemicals go into suspension, Loke knows they're safe to combine. If the two separate, then he doesn't make the application.

The USGA's Bevard says he worries more about the extraneous additives that superintendents put into tank mixes like biostimulants, fertilizers and other chemicals.

"When you start putting other stuff in there, it can lead to pH issues, which can reduce the effectiveness of the fungicide in some cases," Bevard says. "There are potential compatibility issues when you start adding items other than fungicides to the mix, so superintendents need to be careful."

USGA senior agronomist Keith Happ says superintendents should make sure they have added the proper amount of water to tank mixes. If there's not enough water, contact and upwardly mobile fungicides may not function properly.

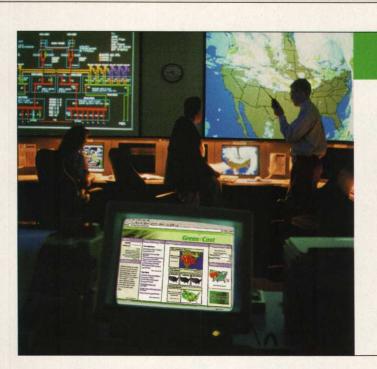
Rutgers' Clarke recommends against tank mixing a fungicide that treats root diseases with a fungicide that treats foliar diseases because the application procedures are diametrically opposed.

"Fungicides that treat root diseases like summer patch need to be watered in after application," Clarke says. "If you mix that with a fungicide that needs to stay on the leaves to treat something like dollar spot, then you've completely defeated the purpose of the mix."

In the future, tank mixing may become far more scientific than it has in the past as superintendents try to use fewer fungicides, Clarke says. He's already seeing superintendents who are calculating the proper timing and ratios that will allow them to customize the programs to meet their exact needs.

"Superintendents are starting to create tailor-made programs for their individual courses," Clarke says. "They know where their diseases strike most often, and they are learning how to deal with them more precisely.

"The ultimate goal is to use fungicides only when you absolutely have to," Clarke stresses. "That's where we're headed - and precision tank mixing will be an integral part of that evolution."



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