Air-conditioned mist the key to thriving bentgrass greens in Florida

'When you turn the misting system on with the blowers, you get cool air blowing across and it's phenomenal — very effective... We have eight or nine Toro 640s around every green that can produce a very low amount of water and high mist. When temperatures exceed 90, we mist for 30 seconds every hour on the hour until it drops to 88 or 87 degrees.'

— Superintendent Dave Lowe, Plantation Club

By MARK LESLIE

PONTE VEDRA BEACH, Fla. — When other Floridians in the 1980s were trying to grow bentgrass on their greens and watching it die, superintendent David Lowe and head mechanic David Smith were tinkering at the new Plantation Club, here. When others abandoned bentgrass and returned to the standard Bermudagrass, Lowe and Smith kept tinkering.

Today, The Plantation Club's bentgrass greens are thriving, thanks to their ingenuity. Their secret goes beyond the usual bentgrass survival programs of adjusting cutting heights, applying fungicides, ventilating, misting, and watering localized dry spots ahead of time.

Lowe and Smith have added a crucial twist to the ventilation factor. Instead of the conventional — and noisy — fans many superintendents place in nearby woods or mount in trees, they are using air conditioner blowers they have converted to oscillate.

"Basically, it's a blower that you find up in attics of commercial buildings that blow into the ductwork," Lowe said. "We put a transitional piece on the front — about 24 inches long and 14 to 16 inches wide at the opening. That funnels the air out and gives you static pressure."

"We mounted it on a pedestal and put on a wheel bearing assembly," Smith explained. "Then I took a small gear motor and put it on with linkages and arms, and attached them to the system so that it oscillates."

Lowe said he has three to five blowers on the edge of every green, cooling the grass and lowering the soil temperature four to six degrees to a depth of three inches. They blow the air three to four miles per hour up to 55 feet.

From June 1 to Oct. 1, when daytime temperatures run from 88 to 100 degrees and humidity many days is 80 to 100 percent, Lowe runs the blowers 24 hours a day. "We can turn the typical 70- to 75-degree nighttime temperatures into 55 to 60 degrees," he said.

"They cause the turf to survive during the day and actually thrive at night. That nighttime care makes the difference because, typically, bentgrass will not grow when you reach July."

"This is a major, major player in our bentgrass program," Lowe said. "When you turn the misting system on with the blowers, you get cool air blowing across and it's phenomenal — very effective.

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The beauty of the blowers, he said, is the fact they're "very, very quiet. They don't disturb golfers or homeowners who live close to greens."

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Lowe said he set up the blowers much like an irrigation design that leaves no space uncovered.

"When we spaced them, we took an anemometer, which measures wind velocity, and went out on the green," he said. "Our goal was to have three to four mile-per-hour wind at 50 feet. When we lost that, we put in another blower."

The blower Lowe and Smith selected to handle their 7,000- to 9,000-square-foot greens puts out 7,550 cubit feet per minute. Smaller and bigger blowers are available.

Over the last four years, they have made constant improvements, like to the oscillating motor, which wasn't strong enough. "We had to go to a bigger, DC motor and put on a control transformer to change it from DC to AC and control the speed of oscillator," Smith said, adding, "Now we have it where we want it."