The renovations have helped to speed up play. A full round takes four and a half hours, with 8- to 10-minute tee time intervals.

**Lower fertilizer rates**

The weather of the summer of 1995 inspired Shields to fertilize more often, but at lighter rates. Normally, he says he would fertilize in the spring and fall with no nitrogen in the summer to avoid stimulating roots during the hot, humid summer. Now with sand greens, Shields and his crew have learned that improved drainage can also mean poor nutrient retention. To counter this situation, he plans to apply fertilizer every two weeks, with a quarter pound of nitrogen, and a potassium spray fertilizer in between.

A mid-range fertilizer helps lower maintenance costs. Fans on four holes were run for 24 hours during the heat wave to flush out the stagnant air. This year, Shields was to install fans on four additional greens.

Shields analyzes turf tissue samples monthly, to learn which nutrients might be deficient, and finesse the course through summer.

A side effect of heavy rain followed by a heat spell is algae, which developed on several greens. Because the algae cuts off airflow to the rootzone, Shields has moved to aerifying the greens more often than normal, every four to six weeks, using increasingly smaller tines as summer approaches.

He also uses the Toro Hydroject aerator to aerate without disrupting the turf surface.

The Duke crew usually water aerates three greens per day, so that any one green is aerified every two weeks.

Shields has not identified the source of the algae, but notes that the aerification schedule has kept algae growth to a minimum.

His plan is to strengthen turf health to the point that infestations of this sort are unable to take hold.

**Few instructions**

Shields manages his staff of 10 with a great deal of flexibility. They know the course so well he doesn't have to supervise very much. He trusts them to do their jobs. He also encourages staff to play golf because he feel they learn to appreciate the course from every perspective.

"I'm lenient, but when it's time to get things done, we all turn out and meet that expectation," says Shields. LM

---

**New industry consultant**

Charles B. "Bud" White, long an agronomist with the USGA Green Section, now has his own turfgrass consultation company to provide technical and managerial assistance. Also a past national manager of agronomic services for Toro, White will be involved with domestic and foreign projects. Total Turf Services, Inc. is headquartered in Watkinsville, Ga. Phone number is (706) 769-4570.

**Athletic field review**

The Sports Turf Managers Association (STMA) has published its fourth annual issue of *Sports Turf Topics*, a compendium of STMA articles. The nearly 40 articles, written by STMA members, have appeared in major green industry journals. To order, call (800) 323-3875.

**GCSAA posts agenda**

The Golf Course Superintendents Association of America has proposed a legislative and regulatory agenda for the 1996-97 fiscal year. Federal concerns include the Worker Protection Standard, Environmental Protection Agency, and Americans with Disabilities Act issues. State level topics include pesticide posting and notification and state preemption of local regulation of pesticide and hazardous chemical use, worker safety, wetlands and environmental quality laws.

In other GCSAA news, golfer Ben Crenshaw has been chosen as the next recipient of the association's Old Tom Morris Award, to be presented in February, 1997.

**Golf & wildlife manual due**

The United States Golf Association reports that a new book on wetlands management should be published in early 1997. Donald Harker and Gary Libby, environmental researchers in Frankfort, Ky., were awarded a grant from the USGA to write the booklet, with the working title of Wetlands Manual for Golf Courses. The illustrated booklet will contain narrative, drawings, case studies and key restoration techniques to help golf course superintendents understand wetlands, and create programs to create, conserve and manage them. The manual is part of the USGA's Wildlife Links program to investigate the relationship between golf and wildlife.