

olf course conditioning has steadily improved. Around Florida and across the lower South, the introduction of the ultra-dwarf bermudagrasses has raised the bar with respect to putting green quality. These new cultivars can be moved routinely at 1/8 inch or less, which was unheard of just a few years ago. Golfer expectations have risen, and in some cases the standards for daily conditioning are equal to or better than what was expected of tournament courses just a few years ago. However, environmental extremes and increasing governmental regulations result in limitations on the use of basic resources such as water, pesticides, and fertilizers. Thus, the question arises as to whether or not golfer demands and expectations can be met in the future.

Successfully managing golf courses in Florida in 2001 meant dealing with environmental extremes. During the winter and into the early summer, a severe drought occurred. This is the normal dry season in Florida, but with below-average rainfall for two to three years, lake and aquifer levels reached record lows, and in a large portion of the state, the alarming reduction in potable water supplies created a crisis situation.

Water management districts around the state were forced to impose or further expand landscape irrigation restrictions. For the first time at many courses, it was necessary to manage with significantly less water. While this presented challenges to course managers, they found that it was possible to survive.

By midsummer, it began to rain with a vengeance, and the opposite extreme developed. Though much needed, periods of prolonged and/or extremely heavy rainfall during the late summer and fall resulted in a new set of course management challenges. By year-end, total rainfall amounts for most of the state had reached at least average levels, and in some locations were as much as 10 to 12 inches above normal. Naturally, this brought an end to the drought, and irrigation restrictions were either completely lifted or reduced by the water management districts. With a rapidly growing population in Florida, however, it is a fact that water has become a limited resource, and less will be available for course irrigation in the future.

The drought and irrigation restrictions of 2001 were a wake-up call for golfers at facilities throughout Florida. Due to demands for a lush

Golfers' expectations vary as to what is the ultimate in course conditioning. Some golf courses in the United States focus on the aesthetics of a highly manicured look in contrast to a more natural presentation of European golf courses, with the primary focus on course conditioning (St. Andrews).

green color, over-irrigation of golf courses has been one of the most common mismanagement practices encountered. The base bermudagrass turf of Florida golf courses does have good drought tolerance, and we found that it was indeed possible to maintain turf coverage and good playing conditions when irrigation restrictions were in full effect. Although adjustments in management programs were necessary, the golfers found better playing surfaces and in particular a lot more roll on their tee shots. Some golfers finally began to realize and accept that green color is not a factor that impacts course quality or playability.

In addition to less water for course irrigation, increased regulation of fertilizers and pesticides has and will continue to occur. In response to environmental concerns, the golf course maintenance industry has made excellent progress in reducing its reliance on these materials. Nevertheless, pesticides must be applied to control heavy pest (insect, weed, and nematode) pressures, and fertilizers have to be used to produce a dense, healthy turf cover. The loss of some compounds is to be expected, and this will make it even more difficult to maintain an acceptable level of pest control. Research continues to develop alternative management practices, treatments, and betteradapted turfgrass varieties or cultivars, but how many facilities will be able to use materials that cost \$300-\$500 or more per acre on a large-scale basis?

Labor is yet another resource issue that has been a major concern. Nearly every golf course I visited this past year was dealing with a labor shortage. Not only was it hard to find and retain adequate staff to keep up with routine maintenance, but there has been a shortage of qualified individuals for assistant and technician positions. There is simply no way around the fact that modern-day course management is labor intensive and time consuming. This is especially true of course grooming and manicuring, which has a big impact on the average golfer's perception of quality. We can talk about prioritizing and reallocating resources, but at a growing number of facilities, essential maintenance practices have been curtailed or have become very expensive due to labor shortages and shrinking budgets.

Over the years I have enjoyed the *Greenkeeper International* magazine, published by the British and International Golf Greenkeepers Association. Something that has always stood out has been the use of the word *presentation*, with the primary focus being course conditioning. Unlike American trade magazines, every picture is not a shot of a green, perfectly manicured golf hole. I find this refreshing but troubling at the same time, because it highlights the fact that the aesthetic side of course presentation is often overemphasized in the United States.

It has been my contention for many years that unrealistic golfer expectations and demands will not be changed until regulations restrict or remove various management tools. I am confident, however, that American ingenuity will prevail and that the golfers of this country will continue to be provided with good to excellent quality facilities. Nonetheless, with ever-increasing limitations on resources, we remain confronted with the big job of educating golfers about the differences between aesthetics and playability.

JOHN FOY is Director of the USGA Green Section's Florida Region, where he visits golf courses throughout the state of Florida.



Modern-day course management is labor

