



Time-Lapse Images Shed Light on Shade

By MIKE PILO

Superintendent, Charlotte Country Club
Charlotte, North Carolina

One of the great agronomic challenges in maintaining a golf course is growing high quality turfgrass in excessively shaded areas. Charlotte Country Club is no stranger to this problem as we have many large trees throughout. The solution may seem simple: increase light penetration to the area by removing the trees. However, the extent to which an area is shaded is not always as obvious to some as it might be to the golf course superintendent, especially when a tree has special meaning for someone or it "adds character" to a hole.

Effectively communicating to club officials that a tree or trees need to be removed in order to consistently maintain healthy turf grass is easier with clear visual evidence. Pictures have helped me to illustrate the quantity and quality of sunlight a turfgrass area receives throughout the day. Armed with this visual information, decision makers are better informed to make the right choice.

Specifically, my goal was to convey the lack of sunlight on the seventh tee complex during the winter months. These tee boxes stayed wet and would often remain frozen for days. Consequently, they have been re-sodded several times over the last few years, most recently with zoysiagrass. I decided to take pictures of the area at regular intervals throughout the day, however this proved to be a great a burden on my schedule. So I looked for camera equipment that could take the pictures automatically.

Time-lapse photography equipment suited for the outdoors can be expensive. I eventually came across a camera that was well-suited to the job and at \$260, was relatively inexpensive. It is called the Deercam Scouting Camera. This camera was designed with a different use in mind, to take pictures of wild game visiting a feeding station. A motion sensor detects the movement of the animal and triggers the camera to take a picture.

(Continued on Page 11)



8:00 a.m.



10:00 a.m.

Shade –

(Continued from Page 10)

A built-in time delay prevents the entire roll of film from being taken of the same animal in rapid succession. The time delay can be set to six different intervals from 15 seconds to one hour. It uses 35mm film, can be mounted in a tree and it is all contained in a weatherproof case. Everything you might want to know about this camera can be found on their website www.DeerCam.com.

The Deercam does not come ready to use for time-lapse photography right out of the box. The motion sensor must be bypassed with a small piece of wire; otherwise it will only take pictures when the motion sensor picks up movement. Fortunately, I was able to enlist Brad



12:00 Noon



was not getting enough sunlight. The committee agreed unanimously to take down the trees immediately.

I included other trees during that presentation as well. The pictures told such a complete story that further explanation was not always necessary for every site. At one point committee members blurted out "take it down" before I could say more than "this is the large hemlock next to the 14th green." In this situation, pictures have proven to be the best communication aid.

(Editor's Note: This article was re-printed with permission from Mike Pilo, golf course superintendent at Charlotte Country Club, North Carolina and the Carolinas Golf Course Superintendents Association and the Carolina Greens publication.)

2:00 p.m.

4:00 p.m.

Peterson, manager of irrigation services at Smith Turf and Irrigation, to figure out how to get this done.

To bypass the sensor, locate both the biggest chip on the circuit board - it will have 14 pins on both sides - and locate the row of 10 holes at the top of the circuit board. Very carefully solder a small wire on the second pin from the bottom left of the computer chip to the fifth hole from the left. This will undoubtedly void the warranty.

Now armed with a time-lapse camera, I photographed several areas with significant shade patterns. I included these pictures in a presentation to the Green and Grounds committee. The result was better than had I expected. It was obvious that the number seven tee complex, pictured,

